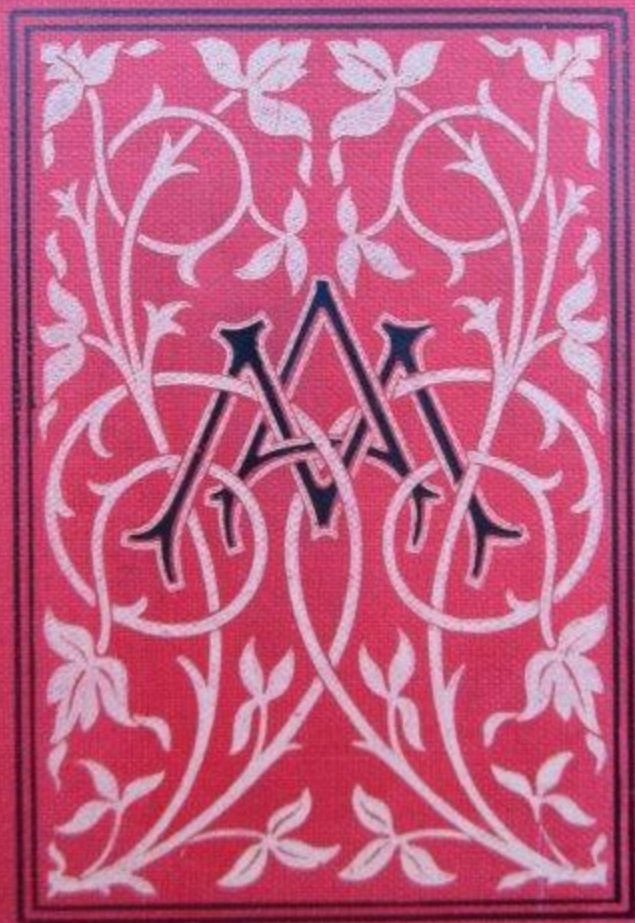


STORIES OF ALPINE ADVENTURE AND BALLOON ADVENTURE





WITH ROPE AND ICE-AXE.
[Drawn by FRANK DADD, R.I.]

STORIES OF
ALPINE ADVENTURE
AND
BALLOON ADVENTURE

BY

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PREFACE



IN the following pages will be found a number of incidents of Alpine Adventure, its delights, difficulties, and dangers. As in other volumes of this series, no attempt has been made at historical or consecutive narrative—the object being simply to present a series of pictures of some of the most remarkable scenes which have taken place in the “Playground of Europe.”

F. M.

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Mont Blanc is the Monarch of Mountains :
They crown'd him long ago
On a throne of rocks, in a robe of clouds,
With a diadem of snow.

BYRON.

STORIES

OF

ALPINE ADVENTURE

CHAPTER I.

ON MOUNTAINEERING.



THE love of adventure is part of human nature. Almost all of us have it in a greater or less degree, though all of us have not the opportunity of indulging it. Even those who have not the nerve and daring requisite for adventure in its more exciting and hazardous forms, read eagerly of the feats performed or attempted by others. Our own country is full of men, ay, and women too, who have risked life and limb in perilous achievements by land or sea. Indeed the love of adventure for its own sake is one of the chief characteristics of the English-speaking race, and it has been of untold value to us in our progress as a nation.

Of all adventurous recreations, mountaineering is at once the most exacting and the most fascinating. Yet, strangely enough, little more than a hundred years ago climbing as a pastime was unknown; and even after the triumph of Jacques Balmat, Mont Blanc was for many years the only mountain which received any attention.

The formation of the Alpine Club, a society which came into existence in 1857 for the purpose of exploring the peaks, passes, and glaciers of the Alpine mountain system, at once gave an impetus to this enchanting recreation. It was not long before it was found that a new pleasure—healthful and full of adventure—had been discovered. The Alps quickly became the "Playground of Europe." Within comparatively easy access were ranges of mountains affording ample scope to the adventurer. And the Alpine valleys yielded any number of guides—men who were fearless and expert climbers, and almost as sure-footed as the chamois which they hunted among the rocky fastnesses.

Men of widely different tastes and professions joined in the sport, and endeavoured to scale apparently inaccessible mountains, deriving pleasure from the thrilling presence of danger and the necessity of constant watchfulness. Gradually mountaineering developed and came to be recognised as an art. The

sad experience of fatal accidents taught men to distinguish between the real and imaginary dangers of the Alps, and showed them that risk could be reduced to a minimum by skill and care.

Of course, then as now, there were those who scornfully asked, "What is the good of it all? What is the benefit of such great exertion?" pointing out the ever-present danger of a sudden and horrible death. Vanity, they declared, was at the root of the matter. But that is not so. The charms of mountaineering are as varied and as many-sided as the mountain itself. The health-giving properties of the recreation, the necessary exercise of strength and judgment, and the pleasurable sensation of having overcome difficulties, may be mentioned among the multitude of its fascinating attractions. The recreation has a moral no less than a physical aspect. Whympers tells us that "often in grappling with everyday difficulties, in apparently hopeless tasks, encouragement has been found in the remembrance of hard-won victories over stubborn Alps."

That there are dangers of a very real kind it is impossible to deny; but many of them may be avoided by experience and caution. Indeed, the greater number of fatal accidents which occur are directly traceable to the neglect of measures such as ordinary

prudence should suggest. Subject as the Alps are to many sudden and violent changes of weather, it is of the utmost importance that the mountaineer should understand the weather signs, and that he should be quick in thought as in action. What under normal conditions may be a safe and easy mountain, becomes dangerous under a storm. Avalanches and falling rocks, sources of terrible peril, have to be encountered, and fathomless crevasses have to be crossed. There are, besides, a host of minor risks; and experience alone can tell the mountaineer how these may be wisely met.

"Patience, pluck, and perseverance" would be no unsuitable motto for the Alpine adventurer, for these are qualities which are absolutely essential, as will be seen from the following pages. The words of one of our greatest climbers contain advice of rare preciousness to all who would attain the heights. He says:

"Remember that courage and strength are nought without prudence, and that a momentary negligence may destroy the happiness of a lifetime. Do nothing in haste; look well to each step; and from the beginning think what may be the end."

CHAPTER II.

THE KING OF MONT BLANC.



"If mortal man can do it, I think I can," exclaimed Jacques Balmat as he stood at the door of his cottage one evening in 1786, looking with longing eyes towards the white-headed monarch of the Alpine peaks.

Balmat was a guide by profession, and his one aim and ambition for many a day had been to reach the summit of Mont Blanc, and be the first man to stand on the highest point of land of the European continent. By day his mind was filled with the daring project, and at night his rest was disturbed by alternating dreams of success and failure, adventure and death.

At length his state of mind became unbearable, and he determined to find out whether or not the summit was accessible. Early one morning he set off

alone. As he was leaving the house, his wife asked him where he was going.

"To the mountain," he replied, "and don't be alarmed if I am not back to-night; I shall likely sleep up there."

Not even to his wife would he at this time entrust the secret ambition of his life. With a strong staff in his hand, a sack over his shoulder, and a crust of bread and a flask of brandy in his pocket, he stalked out of Chamouni and began his perilous journey up the mountain-side.

Proceeding by way of the Côte and the Glacier des Bossons, he reached the three conical rocks known as the Grands Mulets in seven hours. Here he paused for a brief rest. After a mouthful of bread and a sip of brandy he went on again. As he advanced he kept a sharp lookout to find some suitable place in which to spend the night, but none presented itself; and it was not till he had gone too far to retrace his steps by daylight that he was faced with the necessity of spending the night in the snow. Just then, however, he caught sight of a bare flat rock projecting through the snow. It was only six feet in circumference, and afforded no shelter; but as it was the first likely place he had seen, and as there was little chance of him finding better accommodation farther on, he deter-

mined to make the most of it. Another morsel of bread and a mouthful of brandy formed his supper, and he sat down on the stone to await the dawn.

Presently the sun sank into the west, gilding the summit of the mountain with its brilliant rays, and wrapping the valley in gloom. After a time the moon rose, pale and cloud-circled, shedding a dull silvery light all around.

To Balmat, exhausted as he was by his long day's exertions, sleep was out of the question; for on one side of his narrow resting-place was a sheer precipice of eight hundred feet, into which the slightest unconscious movement might have precipitated him. As the night wore on the moon became obscured and snow fell heavily. Balmat was drenched to the skin, and the keen wind seemed to cut through him like a knife. Colder and colder it grew; his breath froze on his handkerchief, and it was only by continually shifting his position, and keeping his hands and feet in motion, that he kept himself alive.

The dreadful strangeness of his surroundings oppressed him with an unspeakable awe. It was not fear, for there was nothing near to make him afraid—there was neither sound nor sign of life; the muffling snow returned no answer to his call—but it was the

wild, unaccountable sense of solitude which takes possession of us at times, when the nerves pass beyond control, and usurp, in a manner, the function of the brain. Now and again the supreme silence was broken by the thunderous descent of an avalanche, or by the cannon-like cracking of a glacier. So the night passed.

When at length day dawned, the sun rose with clouds, and Balmat saw that he would have to abandon the attempt to reach the summit. He spent the day in examining the passes and glaciers, and towards nightfall he began the descent.

When darkness overtook him he had reached a point below the ice region. Thoroughly worn out, he lay down on the ground and slept till morning. It is a marvel that he ever woke out of that sleep, for on awaking he found his clothes were frozen to his body, and he felt numb all over. It was with the utmost difficulty that he made his way down the mountain.

He had nearly reached the base when he met three guides setting out on an expedition. Being suspicious that they were about to attempt to scale the summit, he asked them where they were going. At first they returned evasive answers; but in the end they told him in strict confidence that they were going to try

to make the ascent, and asked Balmat to accompany them.

"With pleasure," he replied, "but I must go and see my wife first. Go slowly; I will catch you up."

Fatigue was at once forgotten, and he hurried off to his cottage, told his wife to prepare him some food, changed his clothes, and went after the others. They bivouacked near the spot where he had previously spent the night, and at dawn the little party set out. About three o'clock in the afternoon they reached the Dôme de Goûter. Here they were joined by other two guides out on a similar expedition. The two parties united, and compared notes. While they were so engaged Balmat set out alone, in the hope of finding the way to the summit. He quickly saw that the only possible path was by crossing the narrow ridge which unites the Dôme to the summit of Mont Blanc.

But how was this to be done? The ridge itself was only a few inches wide, and fell away on either side into an abyss many hundreds of feet deep. There was only one way to traverse it, and Balmat did not hesitate to make the attempt. Climbing to the end, he got on to the ridge astride, as if on horseback, and dragged himself along for about a quarter of a mile. His farther progress was at this point

stopped by a jutting-out mass of ice, which he found it impossible to surmount.

When he returned to the spot where he had left his party, Balmat was dismayed to find the place deserted. Disheartened by the appearance of the mountain, they had pronounced the attempt to be hopeless, and returned to the valley, as their tracks in the snow plainly showed.

When the first surprise was over, the hardy mountaineer did not know whether to regret or rejoice at his desertion. The temptation to follow them was powerful; but the thought that success was nearly within his grasp nerved him to remain. He scrambled upwards for a time, slowly and painfully. The top of the mountain was now enveloped in mist, so he made up his mind not to go any farther; for he knew that even if he succeeded in reaching the summit, he would not be believed by the villagers.

His next task was to seek for some place in which to spend the night; but not a single sheltered spot was to be found. He therefore decided to hurry down as far as possible before daylight failed. The memory of his previous night's experience nerved him to his utmost speed. Suddenly he became conscious that his sight was failing him—the brilliancy of the snow dazzled his eyes, and he was nearly

BALMAY GOT ON THE RIDGE ASTRIDE, AND DRAGGED HIMSELF ALONG.



blind. Whichever way he looked, he seemed to see nothing but large spots of blood. Unable to proceed farther, he sat down and closed his eyes.

At the end of half an hour he had so far recovered that he was able to resume his descent. He had not gone more than a few hundred yards when his staff gave warning of danger, and the next instant he felt the snow sinking beneath his weight—he was on the verge of the Grande Crevasse. With the mechanical promptness of the man who is used to act in sudden emergency, he drew back just in time to save himself from being precipitated into the depths below. Cautiously he walked along the side of the crevasse, looking for the frail ice bridge by which he had crossed in the morning; but again his eyesight failed. When he recovered, night had set in, and there was no escape from the fearful necessity of spending the night where he was—two thousand feet higher than on the former occasion.

Covering his face with his handkerchief, he sat down on his sack. Away down in the valley, ten thousand feet below, he saw the lights in the cottages of his friends and neighbours; and as he thought of them around their warm hearths, he wondered bitterly if any one of them pitied him, alone and deserted on that bleak mountain-side. The intense

cold deprived him of any feelings of hunger or thirst. Now and again, during a pause in the rumble and crack of avalanche or glacier, the wretched adventurer was cheered by the bark of a dog. There seemed to him to be so much companionship in the sound, so much of a home feeling, that it was welcome, and he listened eagerly for its repetition.

The hours dragged slowly by. Snow fell—not in flakes, but in sharp pellets, which cut him like arrows, and seemed to freeze the very marrow in his bones. A fearful heaviness seized him, and an overpowering desire to sleep took possession of him. He knew only too well that these feelings were the harbingers of death, and he struggled against them as a man who fights for his life. The sounds from the valley served to arouse his attention for a time, till one by one the lights were extinguished, and even the dog ceased barking. Then he felt as if the last link which bound him to earth had snapped. He never could tell how he lived through that night. The silence alone was enough to drive him out of his mind, and the noises made by avalanche and glacier were even more fearful than the silence they broke.

Dawn again brought disappointment—the summit

was shrouded in fog; so he at once descended. When he reached home he threw himself down on the straw in the barn, and slept for twenty-four hours. It was several weeks before he was able to get about again after his terrible experience, and during that time he had leisure to think over events, and found that his courage and perseverance had not been altogether in vain. He discovered that if the crevasses which border the Grand Plateau were once crossed, the path to the top of Mont Blanc was clear and unbroken before him. There and then he traced out the route which has been followed ever since with but little variation, and which appears beyond all doubt to be the only practical one. This secret Balmat communicated to Doctor Paccard, his physician, and the two men agreed to attempt the ascent together on the first favourable opportunity.

Early on the morning of the 7th of August 1786, after many days of fog and unsuitable weather, Balmat looked out of his cottage window, and saw that the hour for the great venture had arrived. Dressing himself, he hurried to Paccard's house and asked if he was ready to risk the journey. The doctor replied that he was ready for anything.

The day was spent in making arrangements. Balmat was calm as usual, but the doctor wavered

between delirious excitement and childish fear, which he tried in vain to hide. More than once he urged Balmat to take a couple of guides with them; but the pioneer firmly refused, saying, "If you cannot trust yourself with me stay at home. I will go alone."

Their preparations were of the simplest description, consisting only of a couple of blankets, a small quantity of food, and some syrup to mix with the water. Neither brandy nor wine was included on this occasion, for Balmat had found in his previous expeditions that the alcohol had done him more harm than good.

About five o'clock they started, leaving the village by different routes, so as not to arouse the curiosity of the people. The first night was passed on the mountain-side in comparative comfort, and at two o'clock next morning the two adventurers resumed their journey. All went well for a time till they approached an immense glacier, the sight of which filled the doctor with apprehension. His fears of the day before returned with double force, and he would gladly have abandoned the expedition.

Man has always invested the unknown with imaginary terrors, and the doctor was no exception. The difficulties of the route increased. Immense

crevasses had to be crossed on narrow ice bridges, which creaked beneath their feet, and on which a momentary carelessness meant death. For a time Paccard was completely unnerved. The confidence of his guide, however, reassured him, and again he went boldly forward.

After they had passed the Grands Mulets Balmat pointed out the rock on which he had passed the first night, and again the doctor was ready to sink with an ungovernable fright. At the same moment, to add to his consternation, a sudden gust of wind sent his hat skimming over the precipice. So fierce indeed was the blast that the two men had to throw themselves on their faces, and as they lay there were in imminent danger of being buried under the huge masses of snow which the tempest tossed hither and thither.

By crawling on their hands and knees they managed to make their way to the Dôme de Goûter. Here the doctor utterly collapsed, and refused to go a step farther. Balmat used the utmost persuasion at his command in a vain attempt to nerve him to continue the journey. Not another inch would Paccard advance.

Leaving his companion comfortably wrapped in his blanket, with orders to keep awake, the hardy moun-

taineer set off alone. He found the way much easier than he anticipated; but he experienced great difficulty in breathing, owing to the rarefaction of the air. Every few yards he had to stop to recover his breath, and he felt as if he had no lungs. His symptoms were becoming alarming, when the happy thought came to him of tying his handkerchief over his mouth. This gave him instant relief, and with head down, in face of the cold and the bitter wind, he pressed forward. Suddenly he was conscious of having reached the highest point anywhere around him. He lifted his head and stared about him. Yes! at last his reward had come. He found himself standing on the top of Mont Blanc.

We can but faintly conceive the rush of thoughts and emotions which passed through the mind of the hardy guide at this moment. More than once he looked around, in dread expectation that there might be another peak of greater altitude; but his apprehension was groundless. Every other mountain top lay far below him. Away down in the valley he could see that the inhabitants of Chamouni had assembled to greet the conqueror of the "monarch of mountains." All were there—toddling children and tottering old men and women, waving their hats and handkerchiefs in wild delight. The sight was more than sufficient

recompense for all his toil and fatigue and disappointment. His triumph was complete.

Even then Balmat was not unmindful of his friend



JACQUES BALMAT ON THE SUMMIT OF MONT BLANC.

the doctor; so after another hasty glance round, to make assurance doubly sure that he had reached the summit, he descended. When he reached the spot where he had left Paccard, he found him lying huddled together and apparently dead. Balmat hastily

roused him and shouted in his ear the joyful news, "I have been to the top of Mont Blanc." Instead of a word of congratulation, there came a querulous request to be left alone and allowed to go to sleep.

"Sleep?" exclaimed Balmat; "you didn't come here to sleep, but to go to the top of the mountain. I have been up, and you must come too."

With considerable difficulty the guide got Paccard on to his feet, but he was in such a deathlike stupor that he did not care what became of him. Balmat's vigorous pushing in time restored some slight animation, and they eventually reached the summit. With enthusiasm the guide pointed out the various features of the magnificent panorama which lay unfolded before their eyes. His words fell on deaf ears—the doctor was as one dead. So with a final wave of his hat to those below Balmat began the descent, and a fearful descent it was. Paccard had now lost all power of voluntary movement, and it was only by force that the guide got him along—pushing him in the good places, and carrying him on his back in the bad.

The excitement alone of this performance kept Balmat up, and about eleven o'clock at night they

reached the solid ground below the ice region. For an hour they had been travelling in the dark! When Balmat was wrapping the doctor in his blanket, he found that the unfortunate man had temporarily lost the use of both hands, benumbed by the intense cold, a circumstance to which he was perfectly indifferent. The guide himself had lost the use of one hand, so that there was only one hand between them. However, a vigorous rubbing with snow soon restored the circulation, and after a little supper they stretched themselves on the ground and went to sleep.

About six o'clock next morning Balmat was awakened by the doctor, who remarked, "What a strange thing! It's quite dark, yet the birds are singing."

"It's broad daylight. Open your eyes."

"I don't think I can, for I see nothing."

Balmat looked at his companion, and to his surprise saw that his eyes were wide open. The poor fellow was blind. They at once set off for home, and the guide managed to get Paccard to his house in safety. He then hurried to his own cottage. When he looked at himself in the glass, he was horrified to see that his face was black, his eyes red, and his lips blue. If he smiled or yawned the blood spurted out from his

cheeks and lips, and for long afterwards he could only see in the twilight.

Beyond this he was little the worse for his daring adventure. And the doctor after a time completely recovered his sight.

CHAPTER III.

EARLY ADVENTURES ON MONT BLANC.



THE news of Balmat's successful ascent of Mont Blanc quickly spread over Europe, and reached the ears of Horace de Saussure, professor of natural philosophy in the college of Geneva. For twenty-seven years it had been the dream of his life to reach the summit of Mont Blanc and make scientific observations; but the idea that the mountain was inaccessible had always held him back from the attempt. Now his chance had come, and he lost no time in taking advantage of it.

In July 1787 he arrived at Chamouni, intending to start at once; but unsuitable weather delayed him for several weeks, and it was not until the 1st of August that the attempt could be made. With eighteen guides and a personal servant he set out, taking with him a number of scientific instruments, a tent, and a large quantity of provisions.

The first night was spent at the foot of the mountain, and the next day they ascended a considerable distance. The cold was so intense that some of the guides declared it would be fatal to spend the night at such an elevation. The tent was, however, pitched in the snow, and all crowded into it. After a time the atmosphere became so oppressive that de Saussure went out to breathe. "The moon," he says, "was shining brilliantly in the middle of a jet-black sky. It was a scene of the most solemn and majestic magnificence."

Early next morning the march was resumed, and after many hours of laborious scrambling the summit was gained.

While de Saussure enjoyed the view spread out below and around him, the guides fixed up the tent and arranged his instruments; but when he attempted to use them he experienced the greatest difficulty with his breathing, owing to the rarefaction of the air. Over and over again he was compelled to rest, and pant as much as if he had ascended one of the steepest slopes. For three hours and a half he persevered, but at last his sufferings became so intense that he had to give up without having made all the observations he desired. The descent was accordingly begun, and accomplished in safety. By

this ascent the professor earned for himself the title of "father of mountaineering." He was the first man who had braved the dangers of the Alps in the cause of science.

To Marie Paradis, a native of Chamouni, belongs the proud distinction of having been the first woman to make the ascent of the great white mountain. She was only twenty-two years of age. For a long time her great desire had been to follow in the footsteps of Balmat, and she tried to persuade some of the guides to accompany her, but in vain. Each and all of them absolutely refused, and plainly told her that she could not be in her right senses to dream of such an adventure. At length, in 1809, she succeeded in winning over a guide named Victor Tairraz, who showed her the way to the summit.

Many years later this feat was emulated by another lady — a Swiss, named Mademoiselle d'Augeville, who, with four guides, set out on the 4th of September 1838. She was of a delicate but highly excitable temperament, and during the ascent she behaved with the utmost courage. When the summit was reached, she ordered the guides to lift her up on their shoulders, so that she might say she had been higher than anyone else—higher even than Mont Blanc.

On the morning of the 31st of July 1856, an Englishman named Forman, and his daughter, added to the number of successful ascents. They arrived at the Grands Mulets at three in the afternoon. Here the night was spent, and at two o'clock on the following morning they resumed the ascent by the light of lanterns. A climb of eight hours took them to the summit. After resting half an hour the descent was commenced, and Chamouni was reached in safety at seven o'clock.

"This ascent," says a contemporary notice, "will be talked of as one of the wonders of the valley, both on account of the short time employed—fifteen hours to ascend, and seven to descend—and of the intrepidity shown by Miss Forman. Their progress was eagerly watched during the whole day, and every window that commanded a view of the path was bristling with telescopes, like muskets from a loophole. The arrival at Chamouni was a perfect triumph, the whole population turning out to meet them. A display of fireworks brought a most exciting day to a close."

In following the story of the giant mountain, we now pass over a few uneventful ascents, and come to a series of accidents.

In 1864 a guide who refused to be roped broke through the thin snow layer which concealed a

mighty crevasse, and lost his life. One of his companions was lowered by a rope, and descended to a depth of eighty feet, without discovering any trace of the unfortunate man. A bottle was then let down two hundred feet into the abyss, and on being pulled up was found to be encased in ice. The body was never recovered.

Two years later, Captain Arkwright ascended, in company with his sister and two guides, to the Grands Mulets. Here the lady decided to await her brother's return, and he pushed on. Some time afterwards she heard the report of an avalanche, but she did not associate it with any danger to the climbers. Little did she think that, at that very moment, the relentless foe of the Alpine adventurer was sweeping her brother and one of the guides into a crevasse, from which they would never return, or that the other guide was fighting hard for life, and only escaped as by a miracle. But when he returned alone the whole truth burst upon her, and she read the awful story in the wild look of terror on his face. One can well imagine the terrible scene which ensued on the side of the pitiless mountain.

The first woman who fell a victim to the perils of the mountain was the wife of an American named Mark, who, in company with his wife and her sister—

Miss Wilkinson—attempted the ascent on the 2nd of August 1870. They passed the Grands Mulets in safety, and for a time all went well. Then the ladies complained of fatigue, and expressed a desire to turn back. Mark was, however, bent on reaching the summit, so he put them into the charge of a young porter, and continued the climb. He had not advanced far when he was startled by a piercing scream, and on looking back saw Miss Wilkinson wringing her hands at the side of the crevasse, into which her sister and the porter had fallen. Their bodies were never recovered.

Later on in the same disastrous year a Scottish minister named M'Corkindale, and two American gentlemen named Randall and Bean, reached the summit, accompanied by three guides and five porters. Suddenly a cloud descended, and the mountain was wrapped in fog: Then a terrible storm came on, and for eight days it raged with unprecedented fury. In the valley great anxiety was felt for those on the mountain; but in the face of the tempest the most skilful guides could not have ascended, so there was nothing to be done but to hope for the best.

On the ninth day a search party went out. Near the summit they came on ten bodies lying in the snow as if asleep. All were frozen to death. Of the

eleventh man no trace was found. Probably he had attempted to make his way down, and had fallen into a crevasse. By the side of Bean was found a diary, in which he had written a last message to his wife. The entries were short and eloquently pathetic. The last one read as follows—

“We are without food. My feet are already frozen, and I am dying. I have only strength to write a few more words. I die with faith in God, and my last thoughts are of you.”

From the contemplation of so fearful a tragedy, let us now turn to the ascent of Miss Mary Isabella Straton, which took place in the winter of 1876. Accompanied by two guides and two porters, she started from Chamouni on the 28th of January, and arrived safely at the Grands Mulets. Favoured by fine weather, on the following day she might have reached the summit, had not one of the porters fallen into a crevasse and injured himself so severely that a return to the Grands Mulets was deemed imperative. On the following day the man was sent down to the valley.

About four o'clock on the morning of the 31st a start was again made. The weather was magnificent—clear and calm, but very cold. As she ascended the cold increased, and the wind began to blow

strongly. Presently a halt had to be made, for two of the daring lady's fingers were frost-bitten; and it was not until they had been vigorously rubbed with snow for nearly an hour that the guides would allow her to proceed.

Meanwhile the wind had increased in fury, and was whirling the snow hither and thither in clouds. With dauntless perseverance she struggled forward, and at three o'clock in the afternoon reached the summit. When we read that the thermometer showed ten degrees below zero, we can form an idea of the courage that was needed to achieve that result. After enjoying the view, which the intrepid lady tells us was magnificent beyond all anticipation, the return journey was commenced. She reached the Grands Mulets at seven o'clock, and on the following day returned with her guides to Chamouni, having accomplished a feat unique in the annals of Mont Blanc.

CHAPTER IV.

ENGULPHED IN THE SNOW.



FATAL attempt to reach the summit of Mont Blanc was made in the year 1820 by Doctor Hamel. He was employed by the Emperor of Russia to make some important observations, in course of which he determined to ascend Mont Blanc. His party consisted of a Geneva optician named Selligue, two Englishmen, Durnford and Henderson, and twelve guides.

When they started the weather was clear, and gave promise of a pleasant and successful journey. But from the first misfortune followed them. They had not gone very far when one of the guides swallowed some sulphuric acid in mistake for syrup of vinegar. Fortunately there was a house at hand, from which the doctor obtained some wood ashes, mixed them with water, and made the guide swallow it, and so saved his life.

The Grands Mulets were reached in safety after a day's march. Here the guides made a rude tent with their batons and blankets. Hardly had the adventurers got under cover when a dreadful thunder-storm came on and continued during the greater part of the night. When day broke the weather was still so bad that it was deemed imprudent to advance, and two guides were sent back to Chamouni for more provisions.

On the following morning, however, the weather cleared, and the guides were eager to proceed. With the exception of Selligie, all the party shared their ardour. He declared that he had had enough of mountaineering, and that his desire for adventure was quite satisfied by passing two nights "perched on a crag like an eagle." His companions tried to persuade him to continue, but without avail. He would go back to Geneva; so they agreed to let him have his way, and told two guides who had not made the ascent before to accompany him.

The ascent was then resumed. The weather was most suitable, and their progress was rapid. Shortly after eight o'clock they halted on the Grand Plateau for breakfast, but none of the party could eat much. The end of their journey was in sight, and they were too excited to think of anything but reaching

the summit. In less than half an hour they were off again. The glorious weather, the marvellous stillness which reigned around, and the pure air they breathed, "gave birth in their souls" to feelings which they had never experienced in lower regions.

As the rest of the party were crossing a long snow slope, the snow suddenly gave way beneath their feet, and they were all quickly carried down the slope. What happened after that may be best described in the words of Durnford.

"While endeavouring to regain my footing, the snow above us rushed into the gap that had been made, and completed the catastrophe by burying us all at once in its mass, and hurrying us downwards towards two crevasses about a quarter of a mile below. The accumulation of snow instantly threw me backwards, and I was carried down in spite of all my struggles, and my pole was forced out of my hands. In a couple of minutes I emerged, but so far from being alive to the danger of our position, that on seeing three of my companions some distance below me, sitting motionless and silent up to the waist in snow, I was about to make a jesting remark, till a second glance showed me that the other members of the party were nowhere to be seen.

"Others, however, soon emerged from the mass,

and I was still inclined to treat the matter as a perplexing though ludicrous delay, than in the light



"I WAS CARRIED DOWN IN SPITE OF MY STRUGGLES."

of a serious accident. I was quickly brought to my senses by one of the guides calling out that some of

the party were lost, pointing at the same time to the crevasse into which he said they had fallen. Then we saw that five of the guides were missing. We were soon gladdened by seeing two of them make their appearance. One of them had been thrown into a narrow part of the crevasse, and had managed to scramble out. The other had been dragged up by his companion quite senseless, and nearly black from the weight of snow which had fallen on him; but he quickly recovered.

"Three were now missing, and we refused to believe that they were past hope. We searched in every direction, fathoming the loose snow with our poles—all in vain. Gradually the horrible conviction forced itself upon us, accompanied by the sad reflection, 'I have caused the death of these brave fellows.' But no! it was impossible that they should be dead. Even if they had been swept into the crevasse, it was no reason why they should not turn up presently as the others had done.

"To the crevasse we returned, and descended upon the newly fallen snow. Happily, it did not give way beneath our weight. Here we continued above a quarter of an hour, making every exertion in our power for the recovery of our poor comrades. We shouted, in the fond hope that they might still be

alive, sheltered by some projection of the icy walls of the crevasse; but alas! all was silent as the grave, and we had too much reason to fear that they were long since insensible, and probably at a vast depth beneath the snow on which we stood. When the sad truth burst upon us, our feelings may be conceived, they cannot be expressed."

All thought of reaching the summit was now abandoned. One of the guides, an old soldier, proposed that the ascent should be continued; but no one had the heart to go on. The sole wish of all was to return as quickly as possible. With many a backward glance, in the vain hope of seeing their comrades reappear, the descent was begun. A sad and silent march of three hours brought them again to the Grands Mulets. After a short rest they moved forward again. Darkness came on; but they still kept on their melancholy way, and at length arrived at Chamouni, where they told the pitiful tale of disaster and death.

After this fatal attempt, the snows of Mont Blanc remained untrodden for two years.

The sequel to this thrilling adventure was furnished forty-one years later in the following remarkable manner. On the 15th of August 1861 a Chamouni guide arrived at the house of the Mayor. He was

travel-stained and weary, and carried on his shoulders a sack, which, when it was opened, was found to contain human remains. The man stated that he had found them at the tongue of the Glacier de Bossons, which entered the valley from Mont Blanc. Inquiries were instituted, and an examination was held. It was then proved beyond doubt that these were the bodies of the guides who had perished in the crevasse in 1820. The surviving guides had readily identified them. Their flesh was in a perfect state of preservation, as were also their hats and clothes. Even a leg of mutton, which one of the guides had carried, was quite fresh, but went bad on being exposed to the air.

CHAPTER V.

FIVE WEEKS BURIED.



FOR three days the snow had fallen continuously, and the few houses at Bergamoleto were nearly crushed and buried by the drifts. On the fourth day, however,—the 19th of March 1755,—the weather cleared, and Joseph Rochia and his son went out to clear away the snow, and shovel it from the roof of their house. They were so busily engaged in their task that they did not hear a terrific noise, as of the discharge of a salvo of artillery. Suddenly they were startled by a shout from a man who was passing below.

“Are you deaf there?” he cried. “An avalanche is coming down the mountain in your direction. Get down quickly, or you will be overtaken.”

Father and son did not need a second bidding. They jumped from the roof and fled precipitately

AN AVALANCHE.



down the road in panic. When the first terror seizure was over, Rochia bethought himself of his wife and family, who were indoors and totally unconscious of their swift-approaching doom. He turned back to warn them, but it was too late. Just then, with a roar and a crash, the moving mountain of snow swept down on the cottage and engulfed it. Unnerved as the man already was, it is not to be wondered at that he sank senseless on the snow at the sight of the sudden and appalling catastrophe.

When consciousness returned he and his son made their way to the house of a friend some miles away, where he told the sad story that his wife, sister, and two children had perished in the avalanche. His wife's brother, however, judging from his condition of abject terror, was not prepared to accept his statements, and insisted that they should return to the scene of the disaster, and see if it was not possible to rescue the women and children.

They accordingly set out. - After a long search, and when many openings had been made in the snow, they were unable to find any trace of the cottage. The brother was satisfied that the husband's worst fears had been realised. All further exploration was abandoned till the spring, when they intended to make an attempt to recover the bodies for burial.

During the next few weeks the sun was unusually hot, and under its influence the snow softened and melted to a large extent. Towards the end of April Rochia started for Bergamoletto. He found that there was still an enormous mass lying on the site of his home, but it was in such a condition that it might be penetrated without very great difficulty. He therefore set to work, but before he had done much darkness came on.

Next morning, while he was digging, he was joined by his wife's brother. This man, who lived at Demonte, had a dream on the previous night, in which his sister appeared before him and begged him to come to Bergamoletto and rescue her from under the snow. He was so greatly impressed by the vision that he at once started. He now proposed to assist Rochia in his search.

The two men went to work with a will, and in a remarkably short time they reached the house. With mingled feelings of hope and apprehension they entered. No sound broke the stillness. Everything was as it had been left on that dreadful day. Here and there they looked—not a corner was passed without examination; but no trace of the missing persons could be found.

"What does it mean?" they asked each other in

awestruck whispers. For a time they stood rooted to the spot. Was it possible that the women had left the house and been overtaken by the avalanche? Suddenly Rochia, whose mind seems to have been slightly unhinged since the day of the disaster, remembered that the women and children had gone to the stable, about three hundred yards away, to feed the goats some little time before he went on to the roof.

In desperation they again set to work. A passage had nearly been opened when they heard a faint voice crying, "Help, my dear brother, help." The sound of life put fresh vigour into their arms, and they attacked the snow barrier with redoubled fury. At length an opening was made, and the brother descended, while the husband ran off to procure help. Tenderly the wife, sister, and one child were lifted out alive and carried to a neighbour's house. They were little more than living skeletons, and for a time neither of the women were expected to live. Judicious care and attention pulled them out of danger; but for many a day their pinched faces and anxious eyes told more eloquently than words the story of their terrible experience.

As Rochia said, his wife had gone with her sister and the two children, a boy and a girl, to the stable

to feed the goats, which were shut up there along with an ass and several fowls. She was about to return to the house for something she had forgotten, when she happened to look towards the mountain, and saw a huge mass of snow falling in the direction of the house. She at once went back and shut the door. In a few minutes the whole building was shaken by the violence of the shock, and they heard the roof creak over their heads. Instinctively they rushed to the manger, which stood near the main support of the building; and it was well that they did so, for soon afterwards part of the roof fell in.

When the noise of the falling mass had ceased, they called loudly for help; but no voice could have penetrated so great a depth of snow. The only food they had was a few chestnuts. Two of these and a drink of melted snow formed their breakfast on the first day. Next morning the nuts were finished, and then, had it not been for the two goats, they would certainly have died of starvation. These animals gave about a quart of milk a day at first; but as time went on this quantity greatly diminished. Recognising that their lives depended on those of the goats, they took special care to feed the animals. Over the manger was a hayloft, and the sister pulled down hay for them as long as she could reach it, and

then the goats climbed on to her shoulders and helped themselves.

After the first few days all feeling of hunger passed away, and the milk of the goats satisfied their needs. Daily their position became more dreadful. Not a



SWISS CHÂLETS.

streak of light entered their prison, and it was only by the crowing of the fowls that they were able to mark the slow passage of time. On the sixth day the boy became ill. For a week he lay in his mother's arms, night and day, till death put an end

to his sufferings. Then the ass died, and one by one the fowls dropped off their perch and were heard no more.

Day and night was now alike to them, as they sat huddled together waiting for deliverance. The melted snow dripped down on them in icy drops, the air of the place was foul to an almost insupportable degree, and the prospect of rescue seemed remote enough, but never for a moment did they despair. Throughout everything they felt that they would not be forsaken, and the wife was confident that her brother would be their deliverer. Strangely enough, the rescue came about just in the manner she had expected.

CHAPTER VI.

ADVENTURES ON THE SCHRECKHORN.



USTACE Anderson, accompanied by two guides and porters, set out from Grindelwald on the 5th of August 1857 to climb the Schreckhorn.

They started about ten o'clock in the morning, and proceeded leisurely at first. They had not gone very far when Anderson thought that a light ladder might be of service to him; so he despatched one of the porters for one.

Passing along by meadows in which the haymakers were busy at work, they ascended in the direction of a far-off patch of snow. The sun shone brightly, and the song of the peasants in the fields was heard distinctly through the clear, still air. Gradually, as the distance increased, the sounds became more faint, till the travellers reached the snow patch and rounded a corner of rock, when the singing

completely died away. The sudden stillness was most remarkable, and produced in the climbers a feeling of depression, which did not wear off till the difficulties of the path demanded their attention and gave their thoughts full occupation.

As they made their way along the side of a glacier they heard the sound of falling water, and in a short time came upon a number of cascades, which thundered down among the rocks with deafening roar to the glacier below, which bore unmistakable evidences of the continuous weight of water which poured down upon it from the melting snows above.

A long detour would now have been necessary had they not brought the ladder with them. As they were fixing it a stone fell, and, as always happens, it was followed by a perfect shower, which flew past them dangerously near. The ladder was quickly put in position, and the whole party crossed. A stone struck the edge of Anderson's hat while he was ascending the opposite slope, and one of the porters was struck on the head with considerable force. Blood flowed freely from the wound, and it was necessary to call a halt. Restoratives were applied, and after a brief rest the man was able to continue the ascent, though very badly shaken.

In a few hours they reached "the chief hotel."

This was a number of rocks thrown together in such a way that they formed a rude cave, the entrance to which was by a narrow opening near the ground. Here they decided to spend the night. Anderson, however, did not relish the idea of being an inhabitant of "the chief hotel," so, rolling himself in his blanket, he lay down in the open with his knapsack for a pillow, and slept soundly for several hours. Shortly after midnight he was awakened by a deep-toned thunder peal, and in a few minutes rain fell heavily. Bundling his blanket and knapsack together, he was glad to take shelter in the cave, which he found more commodious and comfortable than he had anticipated.

Next morning the rain still continued, and the greater part of the day was spent in "the chief hotel." About two o'clock the sky brightened, and they ascended some distance and took up their quarters under an overhanging rock. A fire was lighted and supper prepared. Then the guides and porters betook themselves to niches in the rock, leaving their master, wrapped in his blanket, sitting by the fire. The night was bitterly cold, and rain fell heavily, so that all were glad when day dawned and preparations were made for starting.

A steep and lofty glacier-crowned cliff lay in their

path, an apparently insuperable obstacle. A careful search, however, revealed a spot where the rock was slightly worn away by the action of the ice. Towards this they directed their energies, and after a tough climb reached the glacier above. It was cut into innumerable sections by crevasses of great magnificence, and presented a most remarkable spectacle. Here much time was spent, for owing to these gigantic fissures, they had frequently to turn back and strike out in another direction. This delay was most tantalising, as the summit of the mountain seemed to be quite within reach. After repeated failures they finally struck the proper route and entered a valley of snow, from which Anderson, looking upward, saw two peaks. Turning to his guide, he asked the name of the nearer one. "Schreckhorn," was the reply.

"And the farther one is called?" he inquired.

"Schreckhorn too."

"So the mountain has two summits and not one, as appears from below?"

"That is so, sir," replied the guides, "and the more distant peak is about two hundred feet higher."

Anderson, therefore, naturally decided to attempt to scale the higher summit, and the party struck off in its direction; but a gigantic crevasse brought

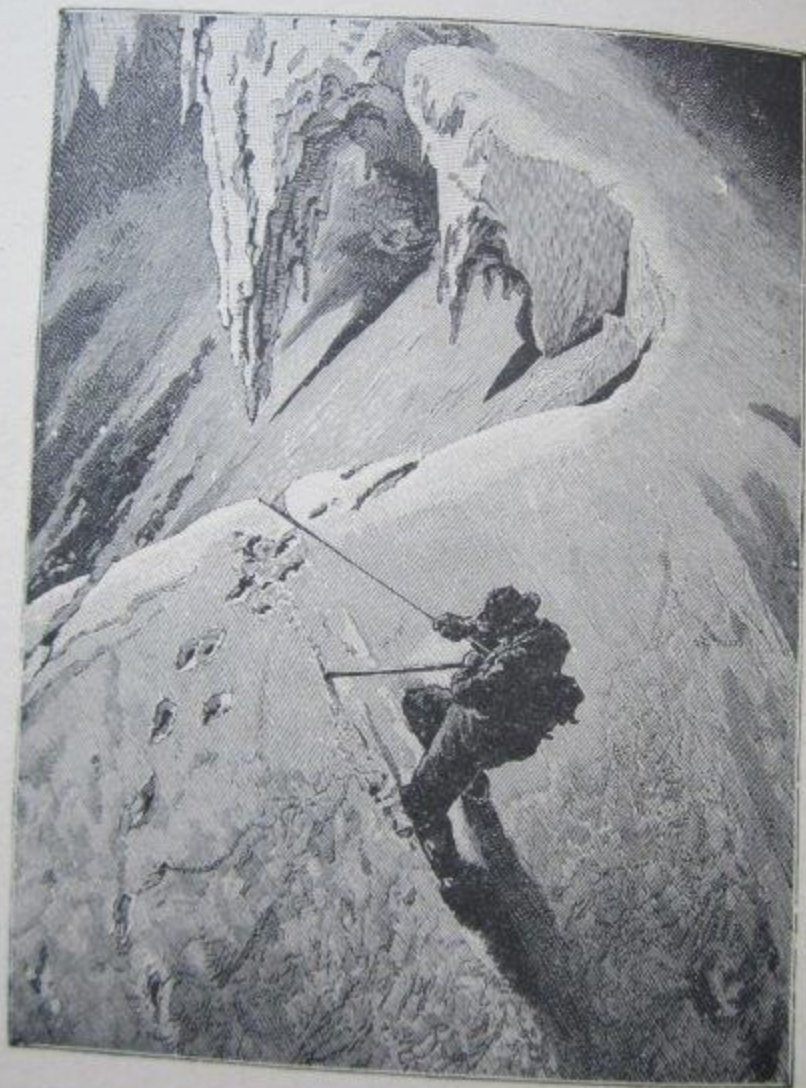
them to an abrupt halt. What was to be done? Right and left they went, in a vain endeavour to find a suitable place for crossing; so they determined to bring their ladder into use. They mounted to the edge of the crevasse, and a few minutes more would have seen them on the other side.

Just then, however, an avalanche of new snow moved down the slope opposite with a gentle hissing sound. As its momentum increased the hissing became a dull roar, accompanied by a crunching noise, as the snow packed together into gigantic blocks. The greater part went over the crevasse, while the remainder flowed over them in a steady stream. Anderson stuck his axe into the snow, and, crouching down on his knees, held on for dear life. It was indeed a fortunate circumstance that they had not reached the opposite side, for then nothing could have saved them; even as it was, the snow that was left poured over them so continuously that they were nearly suffocated.

The moment that the movement ceased Anderson pulled himself out. His pockets were filled with snow, large blocks of it rested on his shoulders, and smaller pieces clung to every part of his clothing. His companions were in a similar state.

Hardly had they knocked the snow from their

clothes, and emptied it out of their pockets, when another avalanche descended, which was fought in



ON THE BRINK OF A CORNICE.

the same way as the first. When it ceased, the adventurers seized their ladder and retreated. The

mountain was evidently not in a humour to allow itself to be assailed with impunity.

Descending a gentle slope, they reached the valley which lay between the peaks, and directed their steps towards a cluster of rocks on the opposite side. A third avalanche rumbled down. On this occasion they were out of its path, but it passed so near that Anderson touched it with the end of his axe.

This avalanche was the cause of an amusing incident, which helped to brighten the disappointed climbers, and infused fresh vigour into their weary limbs. One of the porters came along with the ladder on his head, paying very little attention to the ground over which he walked. Into the tail of the expiring avalanche he strode, and the same moment he was tossed off his feet, and rolled over and over, clinging tightly to the ladder. He soon regained his feet, and was none the worse for his terrifying experience. Leaving the ladder behind, the whole party now pressed forward with all haste to the rocks, to be out of the reach of avalanches. The axes were brought into play, and steps were cut till the frost-broken rock was reached, which afforded good foothold.

A stiff climb brought them to the summit, which was reached at three o'clock in the afternoon. An

extempore flag was hoisted at a height of over thirteen thousand feet. After a brief rest the gathering clouds warned them that it was time to make their way down again before the storm came on. A consultation was held, when it was decided to attempt the descent by the opposite side. A start was accordingly made. Down the precipitous side of the peak they crawled as best they could. Everywhere was rock, "gloomy, sterile, bare rock." Anderson found that he got on best by placing his hands behind him, and creeping down on all fours with his back to the rock. One of the guides, who disdained this mode of locomotion, said to him, "This is granite, sir; one never slips on granite." But Anderson refused to abandon his undignified attitude, and before they had gone much farther the guide did slip, fortunately without sustaining any injury.

Continuing the descent, they reached the summit of a precipice, so smooth and steep that it offered not the slightest prospect of descent. A return would have to be made, but not before a thorough examination had taken place, and the last chance, no matter how wild, had been seen to be impracticable. Peering round a projecting rock, Anderson saw a ledge on the other side which led downwards; and he made up his mind to reach it if possible. This was the most

perilous adventure of the whole expedition. The precipice went straight down some hundreds of feet, and it required a very strong head to enable one to look into the depths below. To add to the risk of the exploit, the men were not roped, and the slightest slip would have proved fatal. Clinging to the projecting rock with both hands, he essayed the fearful risk, while he groped about with his foot to find standing room. He succeeded, and the others followed his daring example with equal good fortune.

Before the descent was accomplished rain fell in torrents, and they reached home drenched to the skin.

CHAPTER VII.

TO THE SUMMIT OF THE WEISSHORN.



ANY had been the attempts by daring and skilful mountaineers to scale the colossal, three-faced pyramid of rock known as the Weisshorn, but all had failed; and as time went on the people in the little village of Randa, at its foot, came to regard the mountain as invincible.

Thither, in 1861, came Professor Tyndall, the well-known physicist, who announced his intention of taking the summit by assault. He was in anything but a fit condition physically for so formidable a venture; and those at the hotel looked on him with pity, not unmixed with scorn, when they heard of the errand on which he had come. He had, however, made up his mind, and no arguments could persuade him to desist.

At one o'clock in the afternoon of the 18th of

August he set out, accompanied by two trusty guides, Benen and Wenger, who had already made an examination of the mountain to find out the most practicable route to the summit. As they made their way through the pines which fringed the lower slopes the professor was tormented by an insatiable thirst, and he found considerable difficulty in keeping up with his companions. Struggling upward for some time at length brought them to a suitable place for resting, and here they decided to spend the night.

When they came to make the tea they found that it was green, so coffee was decided on. Then another difficulty presented itself. As in the case of the ancient mariner, there was "water, water everywhere; but not a drop to drink." The rushing of a river could be heard away in the distance, but it was not easy to locate it among the boulders of ice-covered rock. One of the guides set out to try to find the stream, and returned successful after a short absence. Coffee was then made, and the professor got into his sleeping bag—two pairs of rugs sewn together—for the night.

Next morning Tyndall and his guides were astir at a quarter past two, and waited impatiently for daylight. At length a brightness in the east was seen, and the day began with every prospect of good

weather. They left their camping ground about half-past three, and as they ascended they saw clearly that if their attempt turned out a failure they could not blame the weather. Rounding a shoulder of the mountain they reached a snowfield, which they crossed without any difficulty, then across a glacier. Here they came upon one of the finest imaginable pieces of Nature's sculpture. The rocks were hewn into queer-looking turrets and pillars, scattered confusedly about, interspersed with colossal chips, which looked as though they had been knocked off by some giant hand in the carving.

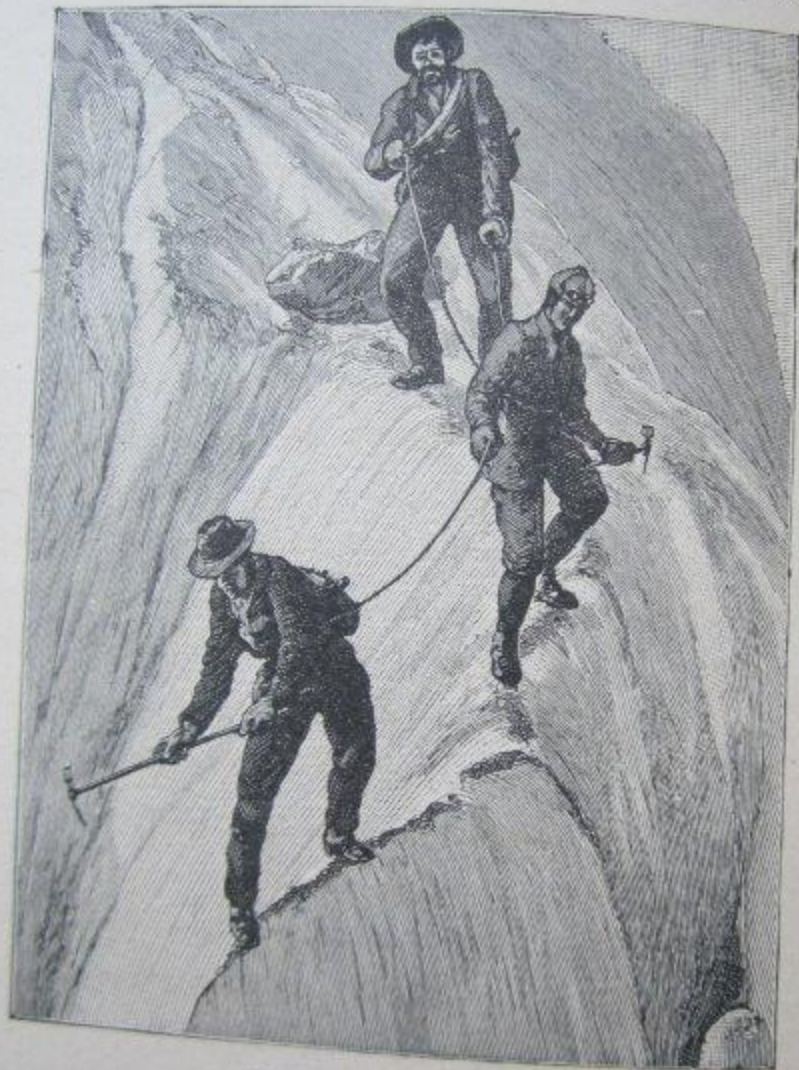
The ascent now became more laborious. The peculiar path called into exercise every muscle of the body; but in spite of the great exertion, Tyndall felt stronger than when he had set out. At the end of two hours' climbing a halt was made, and they turned round to look at the way they had come, when two dark objects on the glacier below attracted their attention. A second look showed them to be a couple of men following as quickly as possible in Tyndall's footsteps, and taking full advantage of the steps his men had cut in the glacier. It was only what might have been expected. The professor's expedition had aroused the greatest interest at Randa, and the most expert mountaineers had begged to be allowed to join; but

all were refused. It was therefore only natural that these two, more adventurous perhaps than the rest, should try the ascent independently; and it was just possible that they might succeed in sharing the honour if the original party failed to win it.

After a short rest Tyndall resumed his journey. Ascending a rough sort of natural staircase, they reached the flat summit of a tower. Their farther progress in this direction seemed to be impossible, for a huge gap had been cut out of the mountain, and there was apparently no way of reaching the tower on the opposite side. But as Tyndall says, "It is wonderful how many ways out of a difficulty there are open to a man who diligently seeks them." Benen carefully surveyed the place, and declared it was easy to descend. Coiling the rope round his waist, he was lowered by his companions over the cliff, till he reached a narrow ledge. Here he waited until the professor joined him, and then Wenger followed. In a few minutes the difficulty was overcome, and they reached the tower by a series of turns and twists, and gained the ridge behind it.

The path was still toilsome, and to spare their strength as much as possible, they turned their backs on the ridge, and made their way along the southern slope of the mountain. Here ice had accumulated in

considerable quantities, and nearly every step had to be cut. This was slow and tiring work, so they again



PICKING A PATHWAY.

returned to the ridge. When they had gone some distance the path became gradually narrower and narrower till it was no wider than the top of a wall,

from which awful precipices dropped sheer down on either side. Once more retreat seemed inevitable, for the ridge was covered with fine snow.

Again, however, the intrepid Benen discovered a way. Pressing the snow with his foot, he found that it became quite solid; and though the foot space was not six inches wide, he crossed in safety by walking with his toes out, like one who walks on the tight rope. His companions followed in his tracks, and reached the other side without mishap. This was a feat of which Benen was justly proud, as well he might be, when we remember that the distance traversed was about twenty yards.

As they continued the ascent they had to proceed with the utmost caution, on account of the loose nature of the rocks. Several times vast masses of stone were dislodged, and touching others as they descended, set them also in motion; and so whole troops went thundering down with an almost continuous roar. The summit was hidden from sight by intervening peaks, and as they mounted from one to another it came more clearly into view, and they tried to estimate the distance they had still to climb. In this they were often the victims of strange illusions. Five hours after starting they seemed so near that they thought themselves sure of success, and hurried

forward to achieve their triumph; but an hour later the peak seemed farther off than ever. No wonder that the mountain had so long remained unconquered. Even Benen was disappointed, and Wenger was distressed as much by the elusive peak as by the arduous climb.

The heat was fearful, and Tyndall felt as if he was in a Turkish bath. There was scarcely a position into which it is possible to contort the body that they had not exercised. "During the forenoon the fingers and wrists were our main reliance, and, as a mechanical instrument, the human hand appeared to me this day in a light which it had never assumed before. It is a miracle of constructive art." Again and again did the professor jump from point to point, and test his strength in other ways, lest some sudden emergency might arise and find him unequal to the strain; for he had determined to turn back the moment the slightest token of exhaustion manifested itself.

A peak now hid the summit from their view, and they pressed forward, confident that the end of their climb lay just beyond. They scaled the height, but to their consternation the top of the Weisshorn lay far beyond, at an apparently hopeless distance. Despair took possession of them. The guides lay

down in the snow with looks of utter despondency in their eyes, and Tyndall suggested that they should at once retrace their steps. His words instantly aroused Benen, who declared emphatically that he would not turn back. "We must win him," he said—meaning the mountain. Those few words were significant of the man's invincible determination. After a short rest and some food they went forward again.

After a long and difficult climb another peak was surmounted, and there, within comparatively easy access, stood "the silvery pyramid, projected against the blue sky." Defeat was now impossible, and they pressed forward with renewed energy. Quickly they crossed the intervening space, and at the end of the ridge reached "a large prism of granite, from which a knife edge of pure snow ran up to a little point." They passed along the edge and reached the point, and the summit of the Weisshorn was won. The adventurers stood at a height of 14,831 feet above the sea.

Almost their first act was to look for the whereabouts of the two men who were following them. They were toiling upwards, but hundreds of feet below. The guides gave vent to their feelings in a wild cheer. Their rivals heard, looked up, and, seeing that their chances of success were gone, turned and

descended to Randa, where they spread the news of Tyndall's success to an unbelieving and scornful audience.

For a time Tyndall was lost in contemplation of the marvellous panorama of peak and glacier which was spread around him on all sides. He was brought to himself by a complaint from Benen, who regretted that they had not brought any means by which they could record their presence on the summit to future climbers. This was, however, easily remedied. The head was taken off an ice-axe, and a red handkerchief was tied to the handle, which was firmly planted on the summit.

The ascent had occupied ten hours, and though they anticipated an easy descent, they judged that it was now time to start. Benen took the lead, and before they had gone very far they saw that the return would be fully as tedious, and even more perilous, than the upward journey. Slowly each crag and cliff had to be negotiated. Benen would drop down to a convenient ledge, and when he obtained a footing the professor descended, and then Wenger followed in turn. During the ascent not a word of warning had been spoken; but now the caution, "Take care not to slip," was repeated over and over again. And, indeed, it was most necessary that he who

thought he stood should take heed lest he fell; for on the treacherous ice-slopes a single false step would have precipitated one down the side at such speed that it would have been impossible to stop.

During the descent Benen proved himself to be an excellent and steady guide. At one point, as he was lowered cautiously over the face of the rock, he cautioned his companions to be still, and not to move until he gave the word. The rock was certainly steep, but to the professor's eye it presented no features of unusual difficulty, and he wondered at the reason of so much carefulness. It was not till he descended in turn, and found Benen on a small rounded projection, with no more than sufficient footing, that he understood. Any unexpected movement would have thrown him down, and he would most likely have drawn his companions after him. Presently they were startled by the loud report of a huge rock crashing down the mountain-side. Another and another followed, till there were fully a hundred of these ungovernable and terrible missiles in full flight on all sides of them. The noise was deafening, and as they struck against the permanent rocks the report of the concussion was accompanied by a bright flash, which heightened the similarity of the occurrence to a discharge of cannon.

So far they had been able to descend without interruption; but now a precipice barred the way, and a long detour had to be made before a place was discovered sufficiently sloping to allow them to pass downwards. Some distance farther on a second precipice was encountered, which necessitated another long round about. Tyndall had given up all hope of their being able to circumvent the barrier, and was on the point of advising a retreat, when the practised eye of Benen caught sight of a point where the cliff was less steep. The polished surface of the rock was broken by a narrow fissure which sloped downwards towards the lower glacier.

"Here we shall descend," said the guide. He grasped the rock, and with his fingers firmly placed in the crack, he worked his body along till he was near enough to the glacier to allow himself to slide down in safety. The other two followed him, and they started across the ice at a good pace.

Presently they were confronted by a third precipice, more awful than the other two. The professor had reached that stage of exhaustion which induces complete indifference both in mind and body. Retreat was inevitable, so he thought; but he became suddenly very wide awake, when he saw his guides turn sharply to the right, and proceed without hesi-

tation in a line parallel to the edge of the precipice. Their eyes were fixed intently on the ground, as if they were looking for something.

"This is the spot," said one. "Yes," replied his companion. On the face of the precipice was a small streak of clay, on which they found a footing, and cautiously descended. It was not an easy task; but to them, worn out as they were, any means of continuing the descent was preferable to a retreat. While they were traversing the glacier below Tyndall asked the guides how they had found out the path. They replied that one day when they were examining the possible approaches to the summit, they saw a chamois trying to get up the precipice, and set themselves to watch. Time after time it failed, till it struck the slip of clay and made its way upwards with comparative ease. The value of such a discovery was too great to be lost, and the men made a mental note of the spot for future reference.

Darkness came on, but it caused them no uneasiness; for they were now free from any uncertainty as to their path. They reached the camp in safety, and after packing up their belongings waited until the moon rose. Then down again on the last and least trying stage of their journey. Soon they saw the light of the hotel shining through the pine trees.

The gleam cheered them, and they put on speed, for they were famished with hunger. Again they looked ahead, and all was dark; evidently the landlord had given them up and gone to bed. One of the guides was accordingly sent on in front to arouse the house and order some food.

About eleven o'clock Tyndall reached the hotel, and after supper went to bed, feeling as if he had drained the last ounce of strength out of his body; but after six hours' sleep he woke none the worse for his arduous adventure.

CHAPTER VIII.

WHYMPER AND THE MATTERHORN.



THE name of Edward Whymper is familiar to everyone as that of one of the most daring and successful of mountaineers. He has ventured life and limb over and over again to reach the summit of some mountain regarded by the natives themselves as inaccessible; and though often repulsed, he has returned to the attack till success at length rewarded his pluck and perseverance.

Never under any circumstances has greater courage or bolder determination been displayed than by Whymper in his attempts to ascend the Matterhorn, that "inaccessible obelisk of rock nearly fifteen thousand feet high, without a rival in the Alps, and with but few in the world." Daring his repeated ventures were undoubtedly; foolhardy they certainly were not.

It was in the year 1861 that his thoughts were

first attracted to this mountain, the last great Alpine peak which remained unscaled. Several attempts had already been made to reach the summit by experienced climbers, among whom may be mentioned Professor Tyndall; but all had been driven back. Nor is their defeat to be wondered at when we know that the mountain "rises abruptly by a series of cliffs, which may properly be termed precipices, a clear five thousand feet above the glaciers which surround its base." In addition to its natural difficulty, all manner of strange stories were told about it—how it was the abode of demons, who dwelt among the ruins of a city which had once capped the summit; and travellers were gravely warned not to approach too near for fear of arousing the anger of the spirits. It was therefore almost impossible to get guides to make the ascent. The majority refused point blank to attempt it; the remainder put such a high price on their services as to make their willingness virtually a refusal.

Having engaged a guide at Chatillon, Whymper made his way to Breil, where he tried to secure the services of Jean Antoine Carrel, the most expert climber and guide at the place. This man alone of all the guides believed in the possibility of reaching the summit, and Whymper was therefore anxious to



EDWARD WHYMPER.

secure his co-operation. But the negotiations fell through, and the adventurer decided to start without him.

On the 29th of August he and the Chatillon guide set out about seven o'clock, and after an easy climb arrived at the ice. Their path then became broken up by numerous crevasses of considerable width, which increased in number and size the higher they ascended. They sought an easier route, and after some scrambling reached a point known as the Col du Lion. Here they decided to spend the night.

The tent was fixed up; but as it did not offer a sufficiently firm surface to the wind, they had to take it down again, for fear it should be swept over the cliffs, and they along with it. When night came on they wrapped themselves in its folds and fell asleep, in spite of the intense cold, which froze the water in a bottle under Whympers head. In the middle of the night they were suddenly aroused by a tremendous noise overhead. The next instant a huge piece of rock came leaping down the mountain, fortunately at some distance from the camp, but near enough to send a shower of stones in alarming succession about their ears.

At daybreak they set out again, making their way up the south-western ridge of the mountain. Every

inch of the way had to be fought for. A long, hard struggle brought them to the *chimney*, "a smooth, straight slab of rock, fixed at a considerable angle between two others equally smooth." The guide tried to climb this apparently insurmountable obstacle, but failed; then Whymper made the attempt, and succeeded. He lowered his rope to pull his companion up, but the man was too heavy. Whymper could not go on alone, and so the ascent had to be abandoned. The return was accordingly commenced, and Breil was reached in safety.

The failure of his first venture made Whymper more than ever determined to conquer the mountain. Accordingly in the following year he returned to Breil, accompanied by a friend named Macdonald. On this occasion he brought with him a tent of special construction, which he hoped would be strong enough to resist the fierce winds which blew against the rock. On the 7th of July 1862 they started on their second attempt, accompanied by two guides and a little hunchback named Luc Meynet, who acted as porter.

As they were ascending one of the guides slipped, and rolled down the mountain at a terrific rate. Fortunately his presence of mind did not desert him, and after a few frantic struggles he managed to stop.

He had received no serious injury, but it was more than an hour before he recovered from the fright and severe shaking. When the march was resumed their progress was slow, and darkness was coming on when the former encampment was reached.

During the night a terrific hurricane broke over the mountain, and continued with ever-increasing force till long after sunrise. When it abated slightly they ventured to leave their shelter to inquire into the state of the weather; but they had only gone a few hundred feet when a gust of wind swept down on them, and they were glad to drop on all fours, and crouch as low as possible. In this position they remained for some minutes, afraid to move, till a lull in the gale enabled them to return to the tent. The guides then declined to go any farther, and it was with feelings of deep disappointment that Whympers yielded to the stern necessity of returning, having accomplished nothing.

When they arrived at Breil they found the guide Carrel waiting for them at the inn. He was evidently attracted by Whympers's dogged determination, and offered to accompany him on a fresh expedition, provided one of his friends was allowed to form one of the party. This was agreed to, and on the following day they set out. The weather was most

favourable, and on this occasion they camped at a height of thirteen thousand feet. At four o'clock on the following morning they were off again, leaving their tent and provisions behind them. The "chimney" was passed in safety; but then misfortune appeared. One of the guides fell ill, and return was imperative.

Bad weather made further attempts impossible for a week; and then, when the conditions seemed favourable, none of the guides would accompany him. His friend had meanwhile returned to England. Impatient of an indefinite delay, Whymper set out alone on 18th July, to see if the tent which had been left behind was all right. He reached the spot, and found everything as it had been left, and sat down to think over ways and means. He became so absorbed in his calculations that he did not notice the flight of time till it was too late for him to return. Fortunately there were some provisions in the tent, and he prepared to spend the night in this wild solitude.

The next day dawned bright and beautiful, and he determined to go still higher if possible. Taking with him a good length of stout rope and a claw—an iron implement which would readily fasten itself in crevices of the rocks—he set out. The rope and

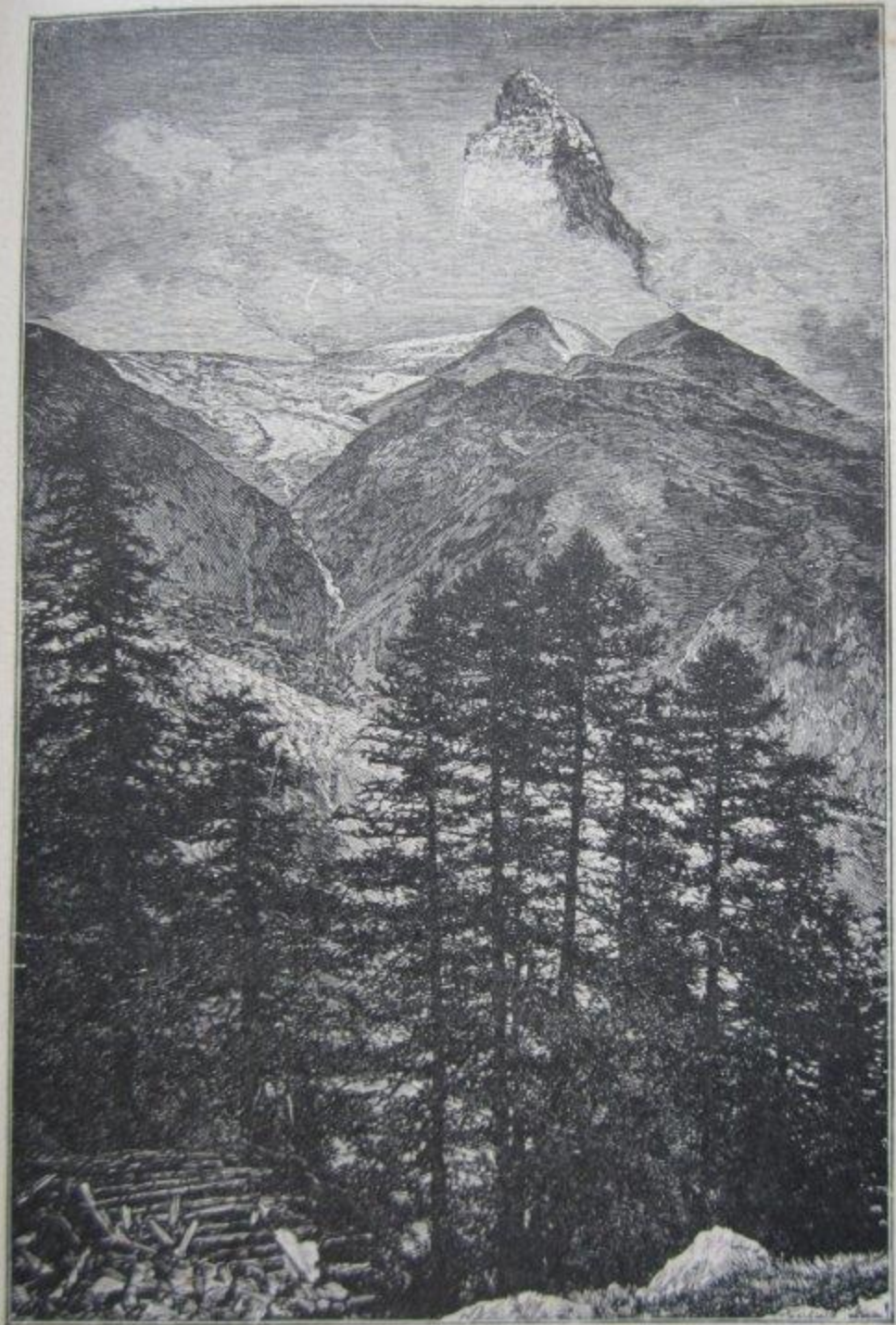
claw rendered him yeoman service, and by their help he was enabled to ascend or descend dangerous passages in comparative safety. It was a terrible climb. At one moment he was hauling himself on to a narrow, precipitous ridge by sheer force of muscle, in constant peril from loose and falling stones; at another he was pressed close to the face of a cliff, anxiously looking for some projection, however slight to lay hold of; and not finding it, had to jump sideways on to a broader and safer footing. His quick eye, clear head, steady nerves, and sureness of foot rendered him equal to every call that was made on his energy and resource, and he succeeded in ascending, alone and unaided, to a height of nearly fifteen thousand feet above the sea—considerably higher than anyone had been before.

He returned to the tent without adventure, and after a brief rest prepared to resume the descent. He had found his axe greatly in his way, and therefore decided to leave it behind, as he did not think he would require it on the way down. All went well till he reached the foot of the Col du Lion, where the path lay round an angle of the cliffs. Since his ascent the heat had melted the steps by which he had come up, and the snow was too hard to tread down. Bitterly did he regret the foolishness

which had caused him to part from his trusty axe. The only way out of the awkward predicament was to cut steps as best he could with the sharp point of his alpenstock. He managed to cut two steps, and was in the act of turning the corner to cut a third, when his foot unaccountably slipped. He fell on his back, and before he could recover himself he was carried down the steep slope with headlong speed.

His stick was wrenched from his grasp, as he was thrown violently against a rock. Head over heels he tumbled, and went careering down by leaps and bounds, his body literally bouncing from rock to rock. He was conscious of striking his head several times in his wild flight, but he felt no pain. Suddenly there was a tremendous shock, and he was hurled fifty feet through the air, and dashed against the rocks which rose on either side of the slope. He received the full force of the blow on his left side, but, wonderful to relate, his senses did not desert him. For a second his clothes caught in the rocks, and just as he was breaking away again he managed to arrest his progress.

The danger, however, was not yet over. Ten yards in front of him was a precipice, at the bottom of which, eight hundred feet below, lay a glacier.



THE MATTERHORN.

He was fearfully bruised and cut, especially about the head, and the blood spurted from his wounds at each heart-throb. His strength was fast leaving him, and he knew what his doom would be if he did not quickly get out of his awkward position. By an exercise of almost superhuman strength he managed to crawl to a place of safety, and then went off in a dead faint. When he came to himself the sun had nearly set, and when he reached the inn it was pitch dark. He received every care and attention. As no bones were broken he quickly recovered, and in a few days he was able to move about.

On the 23rd he again ascended the mountain, accompanied by Carrel and another guide. This attempt was brought to an abrupt conclusion on the following day by a snowstorm. Whymper wished to wait in the camp until the weather cleared; but Carrel said that the snow would make the rocks slippery, and there was no choice left them but to abandon the attempt. Whymper was very indignant at this useless waste of time and energy, and remonstrated with the man; but all to no purpose. On the way down, however, he promised to make another attempt on the following day, provided the weather was favourable.

On the 25th Whymper was waiting for his

guides, when Meynet, the hunchback, came to the inn and said that Carrel could not accompany him as he had other work to do. Annoyed beyond measure at this peculiar conduct, which he was quite at a loss to explain, the mountaineer asked Meynet to accompany him. The little fellow gladly agreed. The road was now so familiar that they ascended rapidly, and in a few hours reached the tent. Here they spent the night, and on the following morning set out again very early. Meynet proved himself to be both ready and reliable, and Whymper had the satisfaction of passing the highest point he had reached on his solitary scramble. About a hundred feet higher up their farther progress was stopped by an almost perpendicular wall of rock, over which it was impossible to advance without ladders. They began the descent highly satisfied with the performance. The ultimate conquest of the mountain was now only a question of time.

When Whymper returned to the inn that evening his high hopes were dashed to the ground. In his absence Professor Tyndall had arrived, and engaged Carrel and several other guides for the assault of the hitherto impregnable summit. The expedition was equipped with everything which experience could

think of to facilitate the ascent, and their success seemed absolutely assured. It was with feelings the reverse of pleasant that Whymper watched the professor's expedition set out. In imagination he already saw the summit won, and the triumph he had so long and painfully striven for snatched from his outstretched hand. His holiday had nearly expired, and he determined not to be a witness of his own defeat; but on second thoughts he decided to await the undoubted issue of the ascent. In due course the professor returned—defeated. He had been, he said, within a stone's throw of the summit, when farther progress was found impossible, and declared that the mountain was inaccessible.

Whymper returned to London, happy in the thought that the summit was still unconquered, but divided in his opinion whether or not it was possible to conquer it. In 1863 he returned again to the assault.

He set out on the 10th of August before dawn, accompanied by Jean and Cæsar Carrel, Luc Meynet, and two other men. The winter had wrought great changes in the appearance of the mountain. Where there had formerly been slabs of stone there were now narrow, sharp peaks of ice, and the rocks in places were covered and rendered extremely difficult and dangerous by a thin coating of ice.

As Carrel was about to cut away some snow he suddenly slipped, and would have been carried downward to certain destruction had he not been able to throw himself back on to the rock, and his comrades at once seized him. As he was being assisted to his feet, he quietly said, "High time we were tied up." They were roped together in pairs, and Carrel took the lead. This part of the ascent was the most adventurous Whymper had experienced on the Matterhorn. Their method of advance was slow but safe. The first two men ascended, helping each other as occasion demanded, those below paying out the rope as they advanced. When a slip took place, as it frequently did, he who lost his footing could not slide more than a few feet before he was drawn up by the others. As soon as the first couple reached a safe position the next advanced, and so on. Thus the risk of accident was reduced to a minimum.

All worked with a will, and the men did not seem to be conscious of the toil. Everything was in their favour, and Whymper looked forward confidently to sleeping within a few hundred feet of the summit. The cold suddenly increased, however, and almost before they were aware of it a snowstorm came on, accompanied by a furious wind. Fortunately they were near a suitable place for camping, and they

hurried to get under cover. Hardly had they erected their tent when a fearful thunderstorm burst over them. The thunder vibrated through the rocks, and the lightning lit up the surrounding peaks with weird and vivid flashes. They were in the very vortex of the tempest, and during the night the adventurers witnessed a sight of unparalleled grandeur and magnificence. The wind continued with unabated violence, and beat upon the tent in such a way that they were in momentary fear of being blown away bodily. To prevent such a catastrophe, one or two sallied out during a lull in the tempest, and piled stones against the windward side of the tent.

About nine o'clock next day they started again, and it took them two hours to ascend about three hundred feet. Snow then came on again, and it was decided to descend. They returned to the inn worn out and disheartened, but determined to try again at a later date.

It was not until the year 1865 that Whympers was once more before the stronghold he had so long endeavoured to capture. This time he decided to tempt fortune on the south-eastern side of the mountain. On the 21st of June he started, accompanied by three guides—Michael Croz, Christian Almer,

and Franz Biener. The faithful Luc Meynet accompanied the expedition as porter.

At ten o'clock they stopped for breakfast, and while it was preparing Whymper went forward to examine the route. As he stood looking round a few stones fell, but he paid no attention. Shortly afterwards a tremendous roar was heard, and a great boulder tumbled down the mountain-side. The men heard the noise, and looking up, saw a perfect shower of rocks coming down on them. They at once threw everything on one side and sought what shelter the place afforded. The masses crashed from crag to crag, striking fire in their passage. Many of them rebounded from the rocks opposite and landed on the ledge on which the men were with deafening crash. After breakfast they started off again, and reached a height of a little over eleven thousand feet, when bad weather and the difficulty of the way compelled them to retreat. Was the ascent possible? In the face of repeated rebuffs it seemed as if the mountain was impregnable; but Whymper could not see why it should be so. Success, he argued, ought to come; but the question was, would it?

CHAPTER IX.

SUCCESS AND ITS COST.



ABOUT a month after the events recorded in the previous chapter, Whymper was at Zermatt getting up a party to make another assault on the redoubtable Matterhorn. He had met a number of Englishmen, all of whom expressed an ardent desire to accompany him on the expedition. He gladly agreed, especially as they had each a reputation for skill and success in mountaineering adventures.

The party was completed, the guides were chosen, and at half-past five on the morning of the 13th of July 1865 they set out from Zermatt. They were eight in number: Whymper, Lord Francis Douglas, Charles Hudson, Vicar of Skillington in Lincolnshire, Mr. Hadow, and the guides—Michael Croz, Peter Tangwalder, and his two sons. They took with them a supply of provisions sufficient for three days.

To guard against possibility of accident, each mountaineer was roped to a guide. The first day they ascended very slowly. The path they had chosen was comparatively easy, and in about seven hours they reached a height of eleven thousand feet. Here they encamped, and sent two of the guides forward to reconnoitre the path. In two hours they returned and reported most favourably of the route. The rest of the day was spent in preparing for the morrow, and shortly after sunset they had supper, and soon afterwards rolled themselves in their blankets.

On the morning of the 14th they were up before dawn, and as soon as it was daylight they started, having first sent the youngest of the guides back to Zermatt. The way lay up a huge natural staircase for about three thousand feet, no part of which presented any difficulty worthy of mention. At ten o'clock they reached an altitude of fourteen thousand feet, and paused for an hour. The summit was now well within their reach, and they congratulated themselves on a speedy and successful termination to their journey.

When they started again the ground became more difficult, and the utmost caution had to be observed in every movement. The most experienced of the

party went first, as there was little to hold on by, and a slip in such a situation might have been serious. There was, however, nothing dangerous about the place provided proper care was taken, and each one did exactly as he was told. With the exception of Hadow, who was only nineteen years of age, and unused to such laborious work, all the members of the expedition made the ascent without requiring any assistance, and in about an hour and a half the peril was over. Turning round an awkward corner of rock the foremost men gave a shout of triumph, for there, across a sloping stretch of two hundred feet of snow, lay the summit.

Two days before Whymper and his expedition had set out, another party led by Carrel had started from Breil with the intention of reaching the summit. They were well equipped, and it seemed more than probable that they would reach the summit before the Englishmen, especially as they had had so long a start. Over and over again on the way up Whymper had turned his anxious eyes to the top, fully expecting to see his rivals triumphant. As he approached the end of his toils and ambition, his excitement was intense, and the moment the last man reached the slope, he unfastened the rope which bound him to his companions, and ran up as fast as his legs

could carry him. Croz, fired by his enthusiasm, followed his example. After a close race they reached the summit together, and to their unbounded delight found that theirs was the victory—not a footprint marked the snow. They hurrahed until they were nearly hoarse, and for a few minutes completely abandoned themselves to the intoxication of triumph.

When that had passed they looked on all sides for their rivals. "There they are on that ridge, about twelve thousand feet below. We must give those fellows a shout to let them know they are beaten." They raised their voices and hallooed in chorus till they were tired, without seeming to have made Carrel's party hear. So that there should be no mistake, Whymper and Croz began to hurl down rocks and stones. This had the desired effect. Carrel's men were seen to look up, and in the next moment they turned and fled—thinking, perhaps, that there was some truth in the old stories about the top of the mountain being inhabited by demons.

Fixing the tent pole in the highest point, Croz took off his blouse and fastened it to serve as a flag, that those below might know of the success of the expedition. They then raised a cairn of stones to record the fact to any who might follow that they

were not the first who had scaled the summit. In this cairn was placed a bottle containing a slip of paper, on which was written the names of those who had formed the successful party.

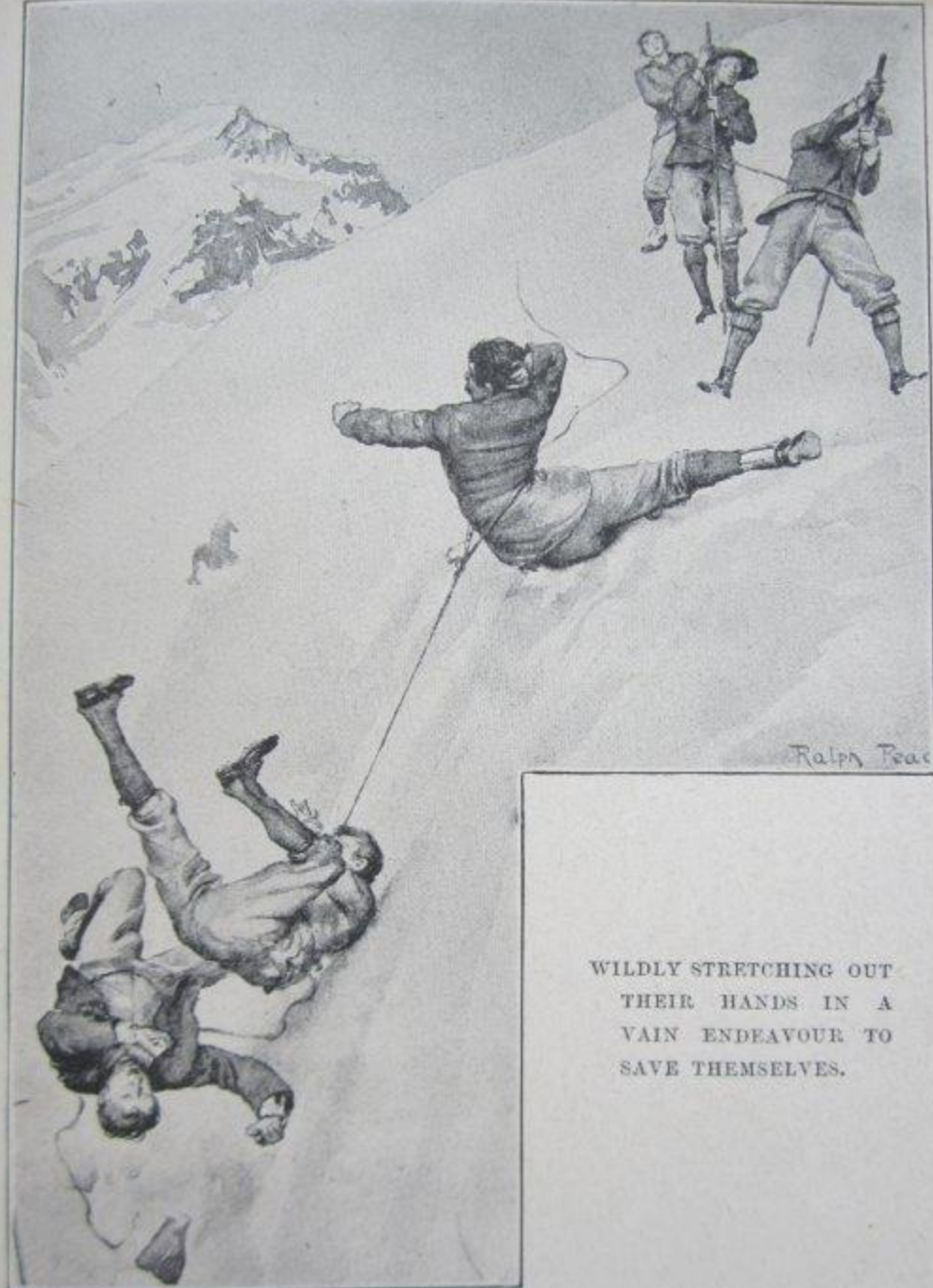
"We then paid homage to the view. The atmosphere was perfectly still, and free from all clouds and vapours. Mountains fifty, nay, a hundred miles off, looked sharp and near. All their details—ridge and crag, snow and glacier—stood out with faultless definition. All were revealed—not one of the principal peaks of the Alps was hidden."

After spending an hour on the summit they prepared to descend. Securely tied together with strong ropes they marched down the slope—Croz first, Hadow second, Hudson, Douglas, Tangwalder, his son, and Whymper last. All went well till they reached the point at which such care had been necessary in the ascent. Again the utmost caution was observed. Only one man descended at a time, and his companion remained stationary until he had obtained a secure foothold.

As is frequently the custom with mountaineers, Michael Croz, after having cut a step, laid aside his axe and took hold of Hadow by the legs to put his feet into the proper positions. As he turned away, Hadow suddenly slipped, and fell against the guide.

Taken by surprise, he was knocked over, and slid down the slope, followed by the unfortunate cause of the accident. Next moment Hudson was dragged off his feet, and pulled Lord Douglas after him. When the others saw what had happened they planted themselves firmly against the rocks to withstand the shock which would come when the rope tightened. There was a sudden jerk, and they stood unmoved. Their companions would soon be on their feet again; but alas! the rope which connected Tangwalder and Douglas snapped under the strain. The terrible tragedy was over in a few seconds. Down they slid on their backs, wildly stretching out their hands in a vain endeavour to save themselves. One by one they dropped out of sight, and fell from ledge to ledge down to the glacier four thousand feet below.

For over half an hour the survivors stood rooted to the spot with horror. The two guides were completely unmanned. They trembled and wept like children, wailing piteously, "We are lost, we are lost." Their grief was pitiful. Whymper's position was perilous in the extreme, and he expected any moment that he might share the fate of his comrades. After a time he succeeded in rousing the elder man to a sense of duty, but before they began the descent



WILDLY STRETCHING OUT
THEIR HANDS IN A
VAIN ENDEAVOUR TO
SAVE THEMSELVES.

he asked for the rope which had broken. It was handed to him. To his dismay he saw that it was old, and, in comparison with the others, thin and altogether unsuitable for the purpose to which it had been put. It had been brought as a reserve, and was only intended to be used should the supply of the better rope be used up. The discovery was a most appalling one, but the fact had to be faced. In silence the descent was begun.

Whymper had had many adventures on the Matterhorn and others of the Alps, but never was he so near death as on this occasion. The guides shook and faltered, and more than once, overcome by the peril of the path, the older man stood stock still, unable to move another step. At the end of two hours the danger was passed, and the descent was continued with greater speed.

Suddenly a fearful and wondrous sight met their gaze as they looked upward. In the sky was seen a mighty bow, colourless, as if formed of mist. The guides felt sure that it had some mysterious significance—a supernatural sign which had some reference to the late disaster. This suspicion was confirmed in their minds when two enormous crosses were seen becoming gradually more distinct within the arch. The strange phenomenon remained motionless

among the clouds for some time, and then disappeared as suddenly and mysteriously as it had come.

Darkness fell soon afterwards, and they halted for the night. Sleep was out of the question after the shock and the awful strain on the nerves, and dawn was gladly welcomed by the little party after the seemingly interminable hours of night. A start was at once made, and in a short time Zermatt was reached. With a heart bursting with grief, Whymper went to the inn and told the mournful news. "The Tangwalders and I have returned," he said. That was all; no more was needed. At once the landlord aroused the village, and a party of men set out to look for traces of the lost mountaineers. In six hours they returned, and reported that they had seen the bodies but were unable to reach them.

On the following day Whymper led another search party. After a climb of nearly seven hours' duration they reached a spot at the top of the glacier. "As we saw," says Whymper, "one weather-beaten man after another raise the telescope, turn deadly pale, and pass it on without a word to the next, we knew that all hope was gone." They went to the spot, and found the bodies in the same order as they had disappeared over the precipice—except that of Lord Francis Douglas, of whom no trace could be seen.

"We left them where they fell, buried in snow at the base of the grandest cliff of the most majestic mountain of the Alps."

A few days later a strong party of guides was sent out by the authorities to recover the bodies for burial. They accomplished their task successfully, and Croz, Hadow, and Hudson were interred in the Zermatt Churchyard. A few scraps of clothing belonging to Lord Douglas were also picked up, but his body was never recovered.

CHAPTER X.

CAUGHT IN AN AVALANCHE.



It was a beautiful moonlight night in February 1864 when Philip Gosset, accompanied by a friend and four guides, set out from the village of Arton to attempt the ascent of the Haut-de-Cry. All the men were experienced mountaineers, ready, brave, and self-reliant.

For some distance the path was very steep; but the party made fairly good progress till they reached a dense pine forest which clothed the lower sides of the mountains. Then the snow became soft, and they sank into it at every step. Travelling was slow and laborious, but still they kept pushing on, resolved, however, if the path did not improve higher up, that they would give up the ascent.

As they advanced the surface gradually improved, and at a height of a little over seven thousand feet

the snow was sufficiently hard to enable them to advance at a fairly good pace. They were in excellent spirits, for the mountain summit with its crystal glitter was above them at only a short distance,



THEY KEPT PUSHING ON.

as it seemed. But their good fortune soon deserted them. Every now and then they sank into the snow, which was frozen only on the surface, and it was with the utmost difficulty and toil that they continued the advance. How slow their progress was may be

judged from the fact that it took them nearly three hours to ascend a thousand feet. Later on they again struck a hard path, and their hopes of success were renewed.

Suddenly, however, the two leading guides sank up to their waists. As it was impossible for them to extricate themselves, they forced their bodies through the snow, thus making a deep furrow. They were at once ordered to halt, for fear of starting an avalanche.

Gosset proposed that they should retrace their steps, and seek some other and safer path. The others would not hear of such a thing, and the march was resumed.

Presently a firm footing was again obtained; but the adventurers had only advanced a few steps when they were brought to a dead standstill by a sound which thrilled them with terror. They stood for a moment as if rooted to the spot, and the voice of the chief guide was heard saying in hollow tones, "We are all dead men."

About fifteen feet above them they saw an ominous crack in the snow, and in silence deep as death they waited for what would happen. Then the ground on which they stood began to move down the mountain-side—they were caught in an avalanche. Then

followed an adventure such as it has been the fate of few men to experience and live to record. Gosset was carried downwards on his back for some distance,



THEY WERE CAUGHT IN AN AVALANCHE.

but managed to turn round and face the valley. Down thundered the avalanche with ever-increasing speed. The wave of snow rose and overwhelmed him; it fell again, and set him free to breathe and

look around. Oh, the horror of it! The head of the avalanche was enveloped in a fine snow-mist, while all around the mass writhed and hissed like thousands of angry serpents.

Slowly, however, the snow tempest subsided, its movement became less and less rapid. Mysteriously as it had started it stopped; first the head, and so gradually backwards.

Gosset, who had managed to keep himself on the surface, was brought suddenly to a standstill. The snow behind him was still sliding forward, completely burying him, and by its tremendous pressure nearly crushing the life out of him. Then everything became still, and he attempted to clear away the snow which covered him; but he was absolutely powerless—he was frozen in the avalanche, which was now pressed together into one solid mass. Again he tried to free himself, and to his inexpressible joy he found that he was able to use his hands. Quickly he scraped away the snow overhead and obtained a little more breathing space; but his arms were too firmly wedged to allow of him piercing the surface. His strength was spent, and he gave himself up for lost, when it occurred to him that he might dissolve the thin crust which imprisoned him by his breath. The plan was successful. There came a sudden flow

of air, and through the tiny opening he had made he caught a glimpse of the blue sky.

He strained his ears to catch the slightest noise; but not a sound reached him in his ice prison. Quickly the thoughts followed one another through his brain. All his comrades must be dead, he reflected mournfully; and with that strange unnatural calmness which comes in situations which leave no niche for hope, he wondered how long it would be ere he joined them.

Hark! what was that? A shout? Yes, the voice of one of the guides. Gosset shouted, and the man approached with cautious steps. Again he shouted, and the next minute the guide was removing the snow from about his head. The first object that attracted the attention of the half-extricated climber was a boot, which he at once identified as belonging to the friend who had accompanied him on his ill-fated expedition. It was within his reach, and he shook it; but no movement was made in return. His friend was evidently unconscious — what if he was dead?

In a few minutes the three surviving guides came up, and reported that they could find no sign of the fourth—the one who had said, "We are all dead men." They at once set to work to cut Gosset out

with their axes. It was a laborious job, for the ice had to be cut from around him, down to his feet, before he could be set at liberty. They then turned their attention to the other man, but it soon became evident that he was dead—crushed and suffocated under an overwhelming mass of snow. As soon as this was known the guides refused to do any more, in spite of Gosset's earnest pleadings with them to lift up the body of his friend. The poor fellows were unequal to the task. The intense cold and the fearful experience they had undergone had completely unnerved them. Gosset himself was almost useless, and it was agreed to return at once. The descent was accordingly begun, and after a weary journey of nearly six hours the melancholy survivors reached Arton in safety.

CHAPTER XI.

FALLING ROCKS AND SLIDING SNOWS.



ONE of the most noticeable features of mountain scenery, which attracts the attention of the visitor to Chamouni, is the Aiguille du Midi. Standing at the point where the Glacier des Bossons falls into the valley, it rises in a succession of tiers thousands of feet above, till at length the narrow snow-topped ridge is reached, which forms the edge of the vast plateau stretching away on the other side. From its position and appearance the peak has been spoken of as "Nature's lighthouse, erected to guide travellers over the snowy plains of Mont Blanc."

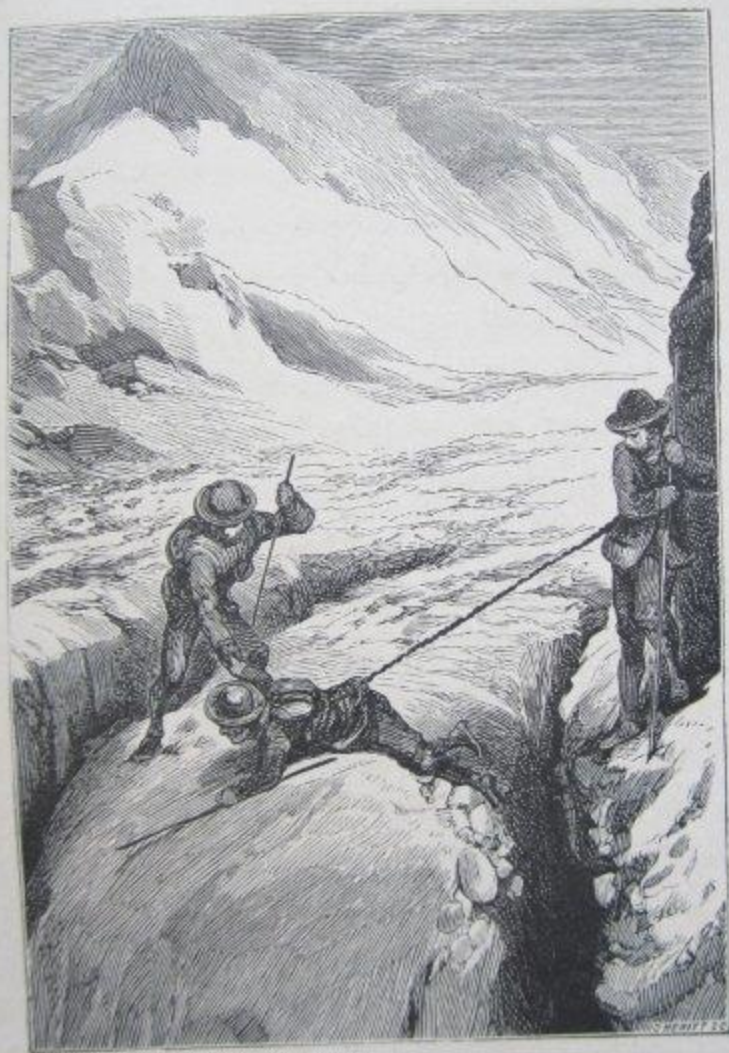
About two o'clock on the morning of the 31st of July 1869, G. E. Foster and Horace Walker, accompanied by two guides, Jakob Anderegg and Hans Baumann, set out from Chamouni to make the ascent of the Aiguille. The moon shone out brightly as

they made their way over the wave-like formations of ice from which the Mer de Glace takes its name. Rain had fallen on the previous night, and having frozen as it fell, rendered walking difficult and laborious. The advance entailed ever-increasing exertions. Steps had to be cut in the ice slopes, numerous crevasses had to be jumped, and narrow, slippery, ice-coated ridges traversed, which called forth all the nerve and skill of the climbers.

At length more favourable ground was reached; but what was gained in surface was lost in the bewildering mazziness of the route. It was quite impossible either to see the direction of the path or to follow it with any prospect of success. A change of direction was therefore decided on, and at six o'clock the party sat down to breakfast. After half an hour's rest they set off again, making for a smooth slope which seemed likely to be easy of ascent. Jakob led the way. For a time all went well; but soon they were brought to a halt. In front of them lay a "glacier broken by huge parallel crevasses, with an utterly impracticable icefall beyond."

After a brief consultation they decided that the peak must lie at the other side of the opposite snowfield, and resolved to attempt the passage of the glacier. For a time they toiled among the

crevasses, crossing them whenever a bridge could be found, till they saw that they could not reach



CREVASSES HAD TO BE JUMPED.

the peak by this route. A turn to the left was accordingly made; but again disappointment went

before them. Another glacier, which sunk to a depth of fifty feet, presented a wall which it was absolutely hopeless to attempt to descend. A similar obstruction lay on their right. What was to be done?

In this emergency Jakob proposed that he should go on alone and endeavour to find a path or make one; and as none of the others had any better suggestion to offer, he set off. His companions waited for some time, and as he did not return they went after him. Following in Jakob's footsteps they reached a long narrow ridge, bounded on the right by a crevasse thirty feet wide, and so deep that the bottom was obscured by a bluish mist, while on the left was a wall which went straight down to a glacier below. Making their way along the ridge, they overtook Jakob "at a point where a bend in the crevasse brought the sides within two feet of each other, but with the top of the upper one thirty feet overhead."

The mountaineer's motto may well be, "Never say fail." The only way to reach the opposite height was by cutting steps up the steep face of the cliff, and Jakob at once set himself to this task. With a few swinging blows of his axe he cut footholes as high up as he could reach, then gripping his axe close to the head, he prepared to ascend. To the entreaties of his companions that he should put a rope round

him he turned a deaf ear. A laborious and dangerous climb took him to the top in safety. Then the others, roped together, followed, making use of the steps he had formed. They found that they had all their work to do to keep from falling backwards, and to them it seemed little less than a miracle that the guide had been able to keep his balance.

At length the party reached a slope, the easy and gradual ascent of which was a pleasant change from the trying difficulties of the morning. The long-wished-for upper snowfields were still out of their reach, and they turned to the left, where the crevasses seemed easy to cross, as they were partly bridged by avalanches. Here, however, the condition of the snow made the advance slow and laborious. Owing to its softness, Baumann sank several times up to his waist. On each occasion it was necessary to pull him back before another attempt could be made. Still they persevered in the face of new and ever-recurring difficulties, and after eight hours of almost incessant toil they reached the snowfield. It was of wide extent, and the crossing of it occupied nearly an hour. At the end of that time the goal of their struggles was practically won.

A halt of half an hour and a second breakfast supplied them with the energy necessary for the

serious work of the last ascent. At the point where they were the rock formed an unbroken slab which it was impossible to climb, so they turned to the left in search of a practicable path. A gap in the rocks suggested a possible route, of which the adventurers were not slow to avail themselves; but before they could reach it they had to descend several hundred feet. This was accomplished in safety, and the last seven hundred feet of the mountain was assailed. The ascent was most difficult, having to be made over large slabs of stone, which taxed their muscles to the utmost. Their progress was slow but sure, and at twelve o'clock the summit was gained.

Here an hour of "intense enjoyment" was spent, and then the descent was begun. Difficult as the ascent had been, it was far less trying than the downward path. It required both strength, quickness, and skill to lower oneself over the long and rotten slabs of stone down to a footing which was somewhere below, but its exact whereabouts could not be seen. Wishing to reach the Glacier des Bossons, the party kept to the right, and arrived safely at the foot of the "lighthouse."

While they were descending the rocky precipice overlooking the glacier, the adventurers had a narrow escape from a fatal termination to their expedition.

At the time of the accident Jakob was leading, and was followed by Walker and Foster, Baumann bringing up the rear. Every precaution necessary on such an occasion was carefully observed. The party was roped together, only one man moved at a time, and the rope was kept tight between each man. Suddenly, as Jakob was crossing a narrow gully, about forty feet of the wall above him broke loose, and, with a terrific crash, hundreds of tons of rocks rolled down towards him, sweeping him from his hold, and hurling him over the precipice. Fortunately Walker was able to bear up against the sudden shock, and to hold on in spite of the fearful strain. For some minutes nothing was heard but the awful report of the rocky avalanche; then a silence deep as death succeeded. In dismay the men looked at one another the question, "What has become of Jakob?"

The rope was tightly drawn over the edge of the precipice, which showed that the guide was at the end of it; but whether he was living or dead it was impossible to tell. "Jakob! Jakob!" they called; but no answer came back. Again they called, and this time a faint reply was heard, that brought relief unspeakable, and nerved them for what might follow. Craning over the rock, Walker caught a glimpse of the guide, who seemed to be badly hurt and bleeding

profusely. Then Foster cautiously shifted his position so that he could see more clearly, and beheld a sight which, under the circumstances, was enough to make the stoutest turn away in horror. The guide's face was black and bleeding, the skin was torn from his hands, and his clothes were in shreds; a circumstance which pointed to still more terrible injuries to be yet discovered.

With astounding fortitude, Jakob contrived to regain his footing, and with trembling fingers untied the rope. Crawling along the face of the cliff to the other side of the gully, he reached a small patch of snow, and began to stanch the bleeding of his numerous wounds. With extreme caution the remainder of the party made their way over the treacherous spot, and joined their injured companion. He had indeed had a wonderful escape. He was bruised all over, but no bones were broken. This he accounted for by the fact that none of the rocks had struck him with full force. The wound on his face, which was about the worst, was caused by a huge stone that grazed his cheek, and would certainly have knocked out his brains if he had not retained sufficient presence of mind to pull his head back. Gradually the bleeding lessened, and in less than half an hour the hardy fellow was ready to take his place again.

When they came to tie themselves together, the full providence of Jakob's escape became apparent—all the strands of the rope by which he had been suspended were cut except one.

Leaving the rocks, they continued the descent for some distance on a snow slope. Baumann led the way, and Walker, whose ribs were hurt by the strain of supporting Jakob, brought up the rear. A narrow gully with deep snow promised a better footing, and thither they shaped their course. There was in this place a danger of an avalanche; but as the going was easier they decided to keep on. Suddenly Walker gave a shout. When the others turned round they saw an avalanche descending, and the next instant it was upon them. Walker and Jakob managed to get on to the sides of the gully, and Foster quickly followed their example. Baumann was less fortunate. The snow swept over him, and he was nearly buried; but he managed to escape without having sustained any injury.

After this they left the gully, and made their perilous way down on the ice, which was covered by a thin layer of snow. Soon, however, they had to return again, for a crevasse barred their farther progress, and the only means of getting to the other side was by crossing the snows, which repeated

avalanches had poured down the gully till they had filled up the crevasse, thus forming a bridge. Baumann was cutting his way down, when a terrific crash resounded above. Looking up, the climbers saw another avalanche of rocks descending from a height of about two thousand feet. Not a moment was there to throw away. The death-dealing artillery of the mountain would be on them in a moment. Rapidly the guide cut the steps; man followed man promptly. Six steps were cut, and then the bridge was reached. They rushed across, and down the débris on the other side. Just then a prodigious avalanche of snow and rocks was hurled over the spot where they had been standing only a minute before. But they had experienced worse things, and with the laconic remark, "That was a narrow squeak," they resumed the march.

The rest of the descent was accomplished without adventure, and the party reached their hotel at eight o'clock, weary and hungry, but well pleased with their exciting day.

CHAPTER XII.

AN ALPINE HERO.



It used to be a favourite saying that "the age of chivalry is dead," but the press records so often illustrations to the contrary that we need not take the cry too seriously. Here, for example, is an instance of what men are still ready to dare and do in the spirit of self-forgetfulness.

Late in the afternoon of the 14th of November 1881 four guides were making their way towards the Bergli hut on the Mönchjoch. The hut was old and had fallen into a state of disrepair, and the men were on their way to examine it and see what could be done to make it fit for next season's service. Night was rapidly coming on, and there seemed little prospect of them reaching their destination before darkness set in, yet their pace was slow; and when it was suggested by one of the party that they should

quicken their steps, a motion of silence, and a warning look towards a comrade toiling painfully in the rear, told as plainly as words that greater speed was impossible.

"What is the matter with you, Peter?" asked one.

"Had we not better rest a while?" suggested another.

"No, no!" replied Peter Schlegel stoutly. "Let us hurry forward while daylight lasts, for many dangerous crevasses lie in the path. I shall be better presently."

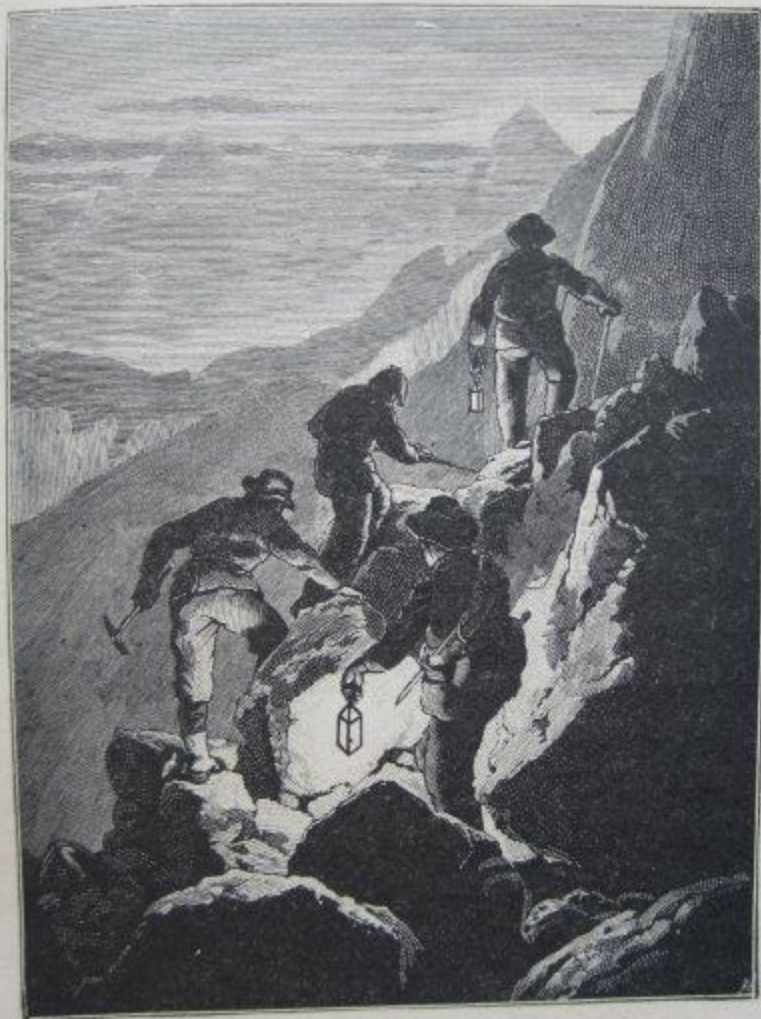
A little way farther on, however, Schlegel dropped on the snow with a smothered groan, exclaiming, "I am done up; you must go on without me."

To this his companions would not agree, and they expressed their determination to stay with him all night if necessary. Schlegel vehemently protested, and pointed out to them the folly and danger of such a course. With heroic self-denial he urged them to push on and leave him where he was.

"By the time you reach the hut I shall likely be all right again. Then after you have had something to eat, one of you can come down and help me up."

The others did not like the idea of leaving the sick man in such a position; but a little consideration showed them that the course he proposed was the

best. They accordingly made him as comfortable as possible, and hurried forward.



BY THE LIGHT OF LANTERNS.

One obstacle after another rose in their path and hindered their progress. On two occasions gigantic

crevasses barred the way, and it was only after a long and tiresome search that in each case a frail ice bridge was found, over which they managed to skim across. When they reached the hut darkness had set in, and they were completely worn out.

After supper, one of the men said, "Give me the lantern, and I'll go down and bring Peter up." Then the startling discovery was made that the precious lantern, had been left behind with Schlegel. The question "What was to be done?" now became momentous. It was a task of more than ordinary difficulty, even for those hardy guides, to descend by that perilous way, and to attempt it without a light would have been madness. Each one looked to his companion to fulfil the promise that had been made to the sick man.

"It's a comfort," said one, "that he is warmly wrapped up."

"Oh, he'll be all right," remarked another; "he will have found the lantern by this time, and know that we cannot come."

Peter Egger, however, could not rest. He left his companions, and going a little way down the mountain, he called his friend by name, at the top of his voice. A faint echo was the only answer. Again he called, but with no other result. "Perhaps

he has fallen asleep," he muttered, as he made his way back to the hut.

A few minutes later, as the men were talking, a faint "Hallo" reached their ears, like a voice from another world. "That's Schlegel calling," shouted Egger, as he rushed out of the hut and called back in answer.

"He'll be calling to let us know he is all right, and has found the lantern, and doesn't expect us down," said one.

"Be that as it may," answered Egger, who entered the hut, "I don't like the idea of leaving him alone all night on the mountain-side, especially as we promised to return for him."

"What can we do, man?" exclaimed one of his companions. "We've no lantern, and to attempt the descent without it is impossible. You would walk into the first crevasse before you knew where you were."

Egger could not but admit the truth of the remark; but he was restless and impatient, and seemed to be turning over some plan in his mind. "I think I'll make a try for it," he muttered, as he went to the door of the hut. In a few minutes he returned, with his plan of action clearly drawn out.

"I think I can find my way down to Schlegel," he

said. "It's a still night, and our candle stuck in the neck of a bottle will give me sufficient light."

No sooner said than done. He broke the neck of a bottle, stuck the candle into it, and with this feeble light set out on his errand of mercy. One of his companions accompanied him. The first crevasse was reached, and with little difficulty the bridge was found. The place had looked forbidding enough under ordinary circumstances, but now the feeble glimmer of the candle rendered it absolutely appalling. A narrow bridge of thin ice spanned a gulf of unfathomable blackness.

Again Egger called Schlegel by name, and an answering hallo was heard in reply. Quickly fastening the rope round his waist, he gave the other end to his companion, saying, "Hang on to that, for if the ice gives way it is my only chance of life. When I get to the other side I will untie myself. You must plant your axe firmly in the ice, and fasten your end of the rope to it, but don't pull the line in. I shall need it when I bring Schlegel up. Good-night."

In another moment he had crossed the crevasse in safety, and was hurrying down the mountain. His companion watched his descent by the flickering flame of the candle until it grew dim and passed

from sight. He then carried out the instructions he had received, and returned to the hut.

Egger made his way swiftly down the mountain, stopping every now and then to shout "Schlegel! Peter Schlegel!" as much to cheer his comrade as to direct his steps by the answering cry. The second crevasse was crossed without difficulty, and soon the guide was gladdened by the sight of Schlegel sitting among the snow.

"How are you now?" was his first question.

"I'm all right. I'm glad to see you, though; I thought you were never coming."

"Well, you see, we left the lantern with you, and it was no easy work to venture down with only the light of a candle. It's an ugly road. Never mind, I'm here all right; so pack up and let us make a start for the hut. Where's the lantern?"

It was quickly found, and while Schlegel busied himself in getting ready, Egger prepared to light the lamp. Suddenly he gave a shout, and dropped the candle in the snow.

"What's happened?" asked Schlegel, in surprise at finding himself in darkness.

"Cut my hand badly. Strike a match."

The light showed Egger's hand crimson with blood, which gushed from an ugly wound in his right hand.

That it was a serious hurt was evident, but little did either man think that the radial artery had been severed by the ragged edge of the bottle neck, and that death was only a question of hours. Schlegel bound up the wound with his handkerchief, and as he did so a jet of blood spurted into his face. With trembling hands he began to bind up the cut anew, while perspiration stood on his forehead in great beads. This was more serious than it appeared. The bleeding still continued. He unbound the wound and tied it up again; he applied snow; he grasped his comrade's wrist like a vice, in the hope of stopping the bleeding; but all in vain. Everything that he could think of in his terror he tried, but without producing any effect.

Meanwhile the two men away up in the hut thought it was about time their companions were returning, and went to the door to see if their light was in sight. Just then they heard a cry for help, and hurried to the edge of the crevasse.

"What's the matter?" they shouted. An agonising cry for "Help! help!" was the only answer. "What do you want?" they called. Schlegel replied, and after a time managed to make them understand what had happened. But they were helpless, even more so than Schlegel himself. They could not

attempt the descent without a light, and they returned to the hut to wait till the moon rose.

Egger was now so weak from loss of blood that he could not stand, so Schlegel dug a hole in the snow and laid him gently in it. He was sinking fast. The white snow where he lay was crimson, but never a murmur of complaint passed his lips. Occasionally he groaned—perhaps he was thinking of the wife and children who were expecting his home-coming on the morrow, and wondering how they would fare when the bread-winner was no more.

The moon rose, and soon afterwards the other two guides arrived. They brought with them some hot cocoa which they had prepared. The wounded man with difficulty swallowed a few mouthfuls, and sank back exhausted. The hole was dug deeper, and when Egger was seen to shiver, his comrades, by a common impulse, stripped off their flannel shirts and wrapped him in them. Then they rushed down in the direction of Grindelwald to summon help.

Gradually Egger sank into a state of insensibility, while Schlegel watched over him and tried to ease him; but the greatness of the poor fellow's need mocked his friend's feeble efforts. We can well imagine the torturing thoughts that filled Schlegel's mind during those weary hours, and nearly drove him

distracted—self-reproach at the reason of the accident; agony at his helplessness; an infinite pity and admiration for the man who had not flinched from his duty, and had braved the dangers of such a descent rather than break a promise. How easy would it have been for him to have made the excuse that there was not a light, or to have waited till the moon rose.

When day dawned Egger was at the last gasp, and a few minutes later all was over. Schlegel covered up the body, and hurried down to the valley with the sad news that help was now of no avail. On the following day a number of the dead man's friends ascended the mountain, and brought down all that was mortal of him who had indeed lost his life in the effort to save his friend.

CHAPTER XIII.

A FEARFUL FALL.



IN the long list of Alpine accidents there is none more melancholy and regrettable than that which took place on the Meije in 1885.

On the 5th of August in that year, two brothers, Emil and Otto Zsigmondy, accompanied by Dr. Schulz, set out from La Bérarde. Their intention was to climb the western peak of the Meije by a new way. All three men were experienced climbers, and considered themselves equal to any emergency which might arise. In the previous month the ascent of the mountain had been made, and the brothers had taken part in the successful adventure, so they set off without guides.

The first night was spent at a hut a few miles from La Bérarde, and at two o'clock on the following morning they started again by the light of lanterns.

At first the path lay through slopes of moraine—accumulations of stones and other *débris*, such as are commonly found at the foot of glaciers—and their progress was slow. Then they crossed the Glacier des Etançons, which was broken up by many crevasses and deep holes, and about six o'clock they gained the rocks.

Here they were exposed to repeated falls of stones; the weather looked threatening, and presently a storm began to rage, from the fury of which they were forced to shelter themselves. When the sky cleared they resumed the ascent, making their way along a rocky ledge. At every step the difficulties increased. The greater part of the ledge was covered with snow which had only recently fallen, but which fortunately did not extend to the edge of the precipice. It was along the narrow space thus left that the adventurers made their way. It soon became evident that a higher ascent was impossible, and Otto and the doctor agreed that it would be wisest to abandon the undertaking. Emil, on the other hand, had argued from the first that his route was not only practicable, but easier and less perilous than the usual way. It was therefore only natural that he should be unwilling to abandon the adventure until every resource had been exhausted.

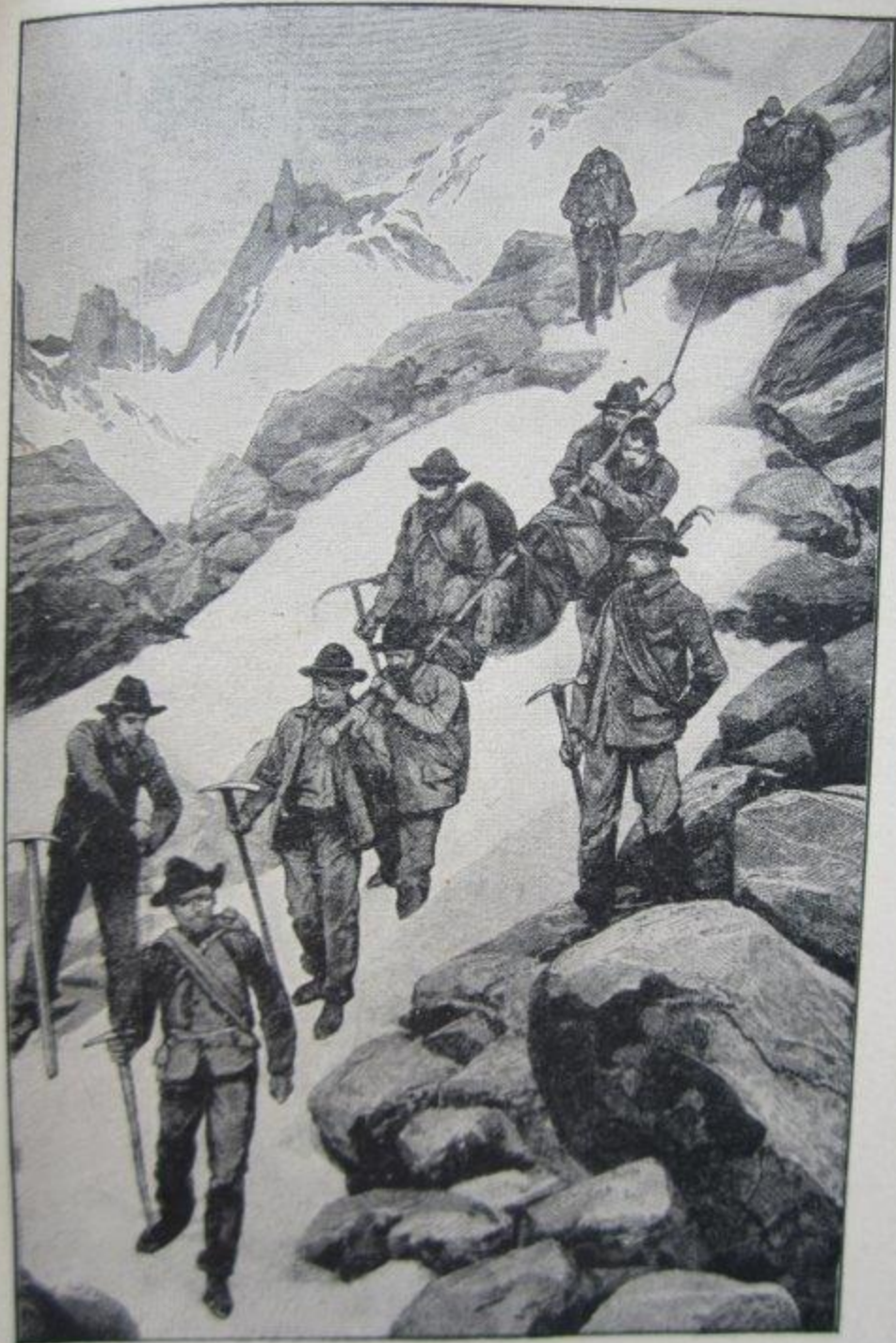
While his companions rested, he fastened a length of stout manilla rope round his waist, and started to scramble up the steep face of the cliff and right overhead. With astonishing pluck he persevered, and each succeeding rebuff seemed only to endow him with greater resource and determination. Right and left he went, but without success. He then turned his attention to a steep gully which ascended straight upwards from where his companions were waiting. The route presented no very great difficulties, and he got about half-way up, when he called out, "It doesn't go any farther." His comrades told him to come back, and he began to descend. A fall of stones, dislodged by the climber, caused Otto and the doctor to seek shelter under a projecting rock, where they remained for a while in momentary expectation of Emil's return. As he did not come they looked out again, and saw to their surprise that he was continuing the ascent. He had already passed the place which a few moments before he had found impassable, and was gaining ground slowly but surely, step by step, on the mountain.

So he went on till he ascended so far that the rope was all used.

"Cannot go any farther for want of rope," he shouted down. "Have you a small coil with you?"

His brother answered that there was a length of silk rope, which he would tie on, if it would be of any use. A cheery "All right, thank you," was the answer; so the silk rope was fastened to the manilla, and the intrepid climber continued the ascent in spite of his friends' entreaties that he should come down. The sight that met the gaze of the watchers as they looked up was one well calculated to cause a shudder of dismay. The rock was perfectly perpendicular, if indeed it did not slightly overhang, and towards this fearsome place Emil was working his way. To give himself greater security, he made a loop in the rope, and fastened it on to a projecting rock overhead; then, holding on with both hands, he lowered himself a few feet.

"I wish he would come down," remarked Otto; "I am afraid an accident may happen." The words were scarcely spoken, when suddenly—how it happened is impossible to tell; perhaps the loop slipped off the projection—Emil fell, and was thrown with great force on the ledge under which his companions were standing. With marvellous presence of mind and promptitude Otto seized the rope, wound it round his arm, and threw the loose part over a rocky spike near. The doctor laid hold of the end, and braced himself for the shock. That instant the



A SEARCH PARTY BROUGHT DOWN THE BODY.

body of the unfortunate man bounded over their heads. The rope was torn off the spike, and the whole weight came on the two men. The suddenness and force of the strain pulled Otto to the ground, and before he could catch hold of anything he was carried downwards, and over the edge of the precipice. In a second he would have dragged the doctor after him, but he grasped a rocky tooth with both arms, and clung to it with the grip of despair. At the same moment the rope snapped. Without a cry Emil was swiftly carried downwards, across a snow-field, and then passed out of sight over a precipice two thousand feet deep down to the Glacier des Etançons. All was over in a few seconds.

When Otto was extricated from his perilous position he was in a fearful condition. His left thumb was broken, his face was streaming with blood, his right hand was severely injured, and his arm was terribly bruised by the rope. Nor had the doctor escaped scathless—his right hand was badly cut and his body bruised.

It is impossible to imagine a more awful situation. Words cannot picture the horror of that descent. Grief, nervousness, fatigue, combined to make the already difficult path almost impossible, and it took them nearly five hours to reach the glacier, where

they found the mangled body. On again they went. Darkness came on, and it was with the greatest difficulty that they reached the hut. Next morning a party was organised, which brought the body down to La Bérarde, where it was buried.

CHAPTER XIV.

A PERILOUS CLIMB.



ON the 23rd of September 1887 a party set out from the hotel at Mürren, in the Bernese Oberland, to attempt the ascent of the Silberhorn by a route which had never before been successful. H. Seymour King, the well-known mountaineer, was the leader. He was accompanied by a porter and two guides—Ambrose Supersax and Louis Zurbrücken.

They made their way without difficulty to the spot where they had arranged to spend the night, and after a good night's rest they were early astir and impatient to resume the ascent. The season was far advanced, and it was not till five o'clock that there was sufficient daylight to enable them to start.

King and the two guides set out, leaving their provisions and other things in charge of the porter.

They only took with them a knapsack of necessities, and as they did not know if they would return that way, they instructed the porter to watch for their appearance higher up the mountain. If they made a signal to him, he was to wait their return; but if no sign was given he must pack up the things and return.

Making for the gap at the extreme westerly end of the ridge which ran down the rock face, they advanced rapidly till they were just below the gap. Here, owing to the excessive smoothness of the rock, and the consequent difficulty of finding foothold, they experienced some delay; but they finally reached the gap. They now congratulated themselves that the worst part of their climb was over, and that the question of reaching the summit was only a matter of time. Their rejoicings were, however, premature, as they discovered to their cost almost the next moment.

From the gap they attempted to reach the ridge, which was not more than twenty feet above them. On all sides the rocks overhung in such a way that it was impossible to surmount them. Each man tried in turn; but all three had to return unsuccessful and exhausted. An hour was spent in vain endeavours, then they sat down to breakfast and

to discuss further operations. As he was looking round, King spied a bottle in a niche of the rock. To scramble up, seize hold of it and open it, was the work of a minute. On the paper inside were found the names of two mountaineers and the guides, and an account of their journey up the mountain to this point, which had taken place many years before.

This was adding insult to injury. To think that they had almost worn themselves out, and yet had only reached a point which had already been won by previous adventurers. It was not to be borne. The news added fuel to the fire of their determination, and they resolved to reach the summit cost what it might. A moment's calm reflection, however, showed them that it was impossible. No human being could climb an angle such as that which the rocks made. Ambrose alone persisted in his resolve, declaring "there was no power in the tongue of man to alter him." When the others spoke of returning he told them that they might please themselves; as for him, he meant to overcome the difficulty, and would not go one step backward until he had.

Tying the rope firmly round his waist, he ordered his comrades to lower him down the northern side of the mountain. With all the skill of the expert

cragsman, he worked his way down and along till a hundred feet of rope were expended. A second length of eight feet was added, and this also was paid out; but the way to the ridge had not been found. "He will have to return now," said the men to each other. Just then Ambrose's voice was heard in tones of command, telling them to "let go the rope." Warning and entreaty were alike thrown away on the determined guide. He repeated his orders, and began to pull in the rope, which he coiled up, slung over his shoulder, and then resumed his perilous climb unaided.

Half an hour passed, and the two watchers began to feel anxious. They shouted; but no answer was returned. Some accident had surely befallen him. Shortly afterwards they were started from their melancholy musings by a cheery shout overhead. Ambrose had succeeded in his wild adventure, and had surmounted the ridge. Almost before they could realise the fact, they saw his face peering over the cliff above them. "It was really a magnificent exhibition both of pluck and skill." Lowering the rope, Ambrose hauled his companions one by one on to the top of the ridge.

Some idea of the impracticable nature of the place may be formed from the fact that when King

was hauled up he was utterly breathless, from the exertions he had had to make, and from the pressure of the rope on his ribs. For a time he could only lie on his back and gasp feebly.

Two hours had been spent in endeavouring to reach the ridge, and the adventurers now pressed forward rapidly to make up for lost time. Presently, however, the ridge became so narrow that they could only proceed by crawling on hands and knees, and farther on they had to drag themselves along sitting astride the narrow rock. When at length it became wide enough to permit them to stand, the surface was so bad that they had to take to the ice for some distance. After an arduous climb they reached the summit of the peak at the eastern end, from which they had a view of the Silberhorn, "jutting out like a great white promontory into a frozen sea."

The day was now so far advanced that they saw it would be impossible to return by the way they had come. Looking back, they saw the porter in the distance waiting for the signal; but they made no sign, so he packed up and went home. Continuing their ascent, the travellers found the snow in such a dangerous condition that they once more returned to the rocks for fear of starting an avalanche. This

was one of the most trying portions of the ascent, for the rocks were in a crumbling state, and there was ice about in considerable quantities.

A climb of two hours and a half brought them to the summit at half-past three, and they advanced nearly to the end of the promontory; but the lateness of the hour compelled them to think of the return. In less than three hours darkness would be upon them, and it was a question whether it would not be better to spend the night on the mountain, or to push on and try to reach one of the huts on the neighbouring Jungfrau. The latter course was decided on, though the success of it depended on two circumstances over which they had no control—the condition of the slopes leading up to the snowfield which encircles the Jungfrau, and whether there were any recently made steps by which they might descend the mountain. At all events, they thought anything was preferable to spending the night exposed to the biting north wind which swept the heights.

They were not long in doubt as to their probable lodging for the night. They found the snow on the slopes frozen hard, and the slow and laborious process of step-cutting had to be resorted to. The shadows lengthened, night came down, and the moon rose slowly in the sky. By its feeble light they

continued on their way, keeping alive the last slender shred of hope that there might be steps cut ready for their descent; but in this also they were doomed to disappointment. Undaunted, they set to work to carve their own way down the steep blue ice; but in a few minutes the intense cold, and the apparent foolhardiness of the venture, made them decide to wait until morning.

Returning to the rocks, they chose a sheltered corner in which to pass the night, and began to rake out the snow which had accumulated with their axes. The exertion of this work warmed them up a little, and after a few mouthfuls of food they sat down, prepared to make the best of a most uncomfortable and cheerless bivouac.

It seemed as if the night would never pass. The three men huddled together for warmth. The uppers of their boots were frozen, and they had to keep stamping their feet and beating their arms to prevent frostbite, while all the time they were struggling against an almost overpowering inclination to go to sleep. Dawn found them very much exhausted, and they gladly welcomed the light. Breakfast was their first thought; but to their dismay the scanty supply of provisions they had husbanded from the night before was worthless. The eggs were turned into icicles, the

bread was as hard as wood, and would have required an axe to cut it; even the spirits they had with them were frozen. Hungry, thirsty, and dispirited, they started to resume cutting the steps; but the wind was so cold, and their nerves so unsteady through exposure and want of food, that they had to wait for another hour, till the sun warmed the rock to some extent.

Again they essayed the descent, this time with success. As they made their way down they had good reason to be thankful that they had listened to the dictates of prudence on the previous night, and had not attempted to descend in the dark, for they could not have done so without coming to grief. Wearily they dragged themselves along, their only refreshment an occasional mouthful of water, and it was not until three o'clock in the afternoon that Grindelwald was reached. Here, surrounded by the comforts of the hotel, their hardships were forgotten, and only the delights of triumph were remembered.

CHAPTER XV.

ENTOMBED IN A GLACIER.



NE of the most thrilling episodes recorded in the annals of mountain climbing took place in August 1897.

Herr Sachs, a gentleman from Breslau, had left Zermatt with two guides on a mountain expedition, when, about noon on the second day, he suddenly sank up to his armpits in a crevasse of the Trift glacier, which had been hidden from view by the freshly fallen snow.

At first his position did not seem to be dangerous as he was roped to his companions, and he was not in any way alarmed at the occurrence. He attempted to work his way out by the help of his axe, but without success. Then one of the guides called to him to stop beating about, and told him to fix the weapon firmly in the ice.

"I will then catch hold of it," he explained, "so

that you will have a firm hold, and be able to draw yourself out."

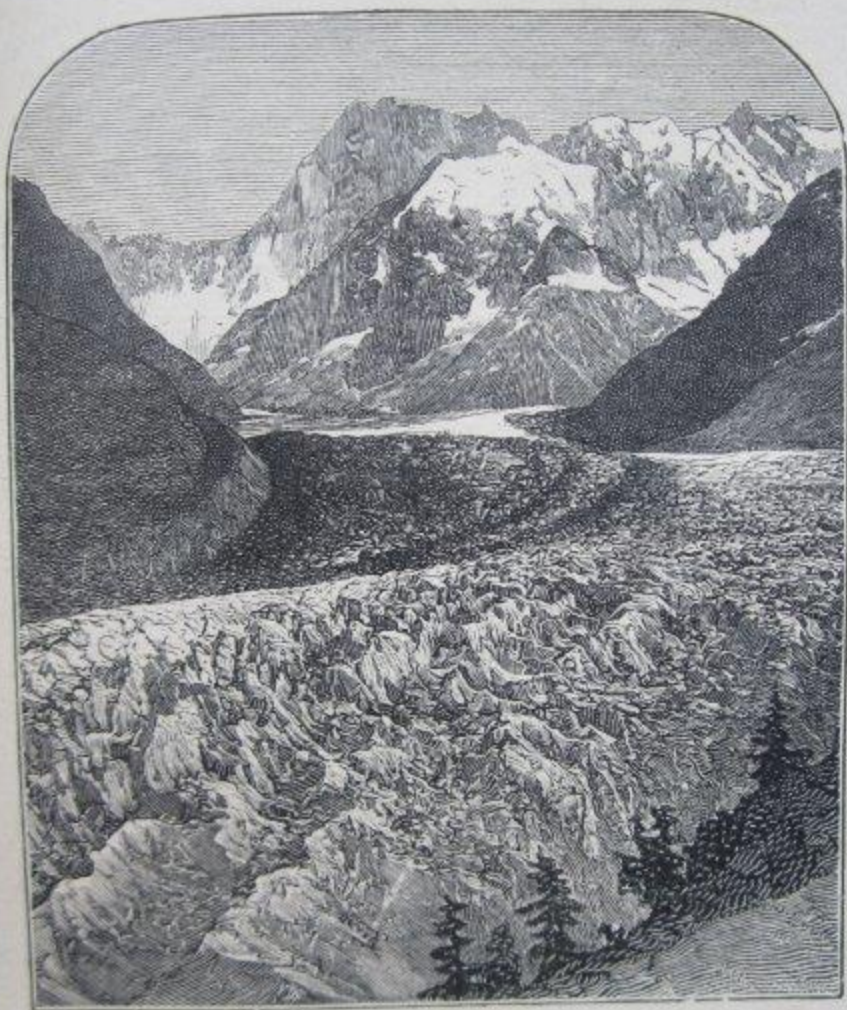
This was done; but just as the guide was about to seize the axe, Sachs raised his arm, the noose of the rope slipped from it, and the unfortunate man sank without a word into the depths below.

The whole affair happened so suddenly that for a moment the guides stood petrified with horror—but it was only for a moment. At the top of their speed they hastened for help. On their way they met three gentlemen, to whom they told the alarming story. Two of them happened, fortunately, to be doctors, and they at once hurried towards the crevasse, while the guides pursued their way to Zermatt.

It was seven o'clock when the three arrived at the crevasse, and on looking back they saw a column of guides working their way up from below with tremendous exertions. This courageous little band had overcome difficulties in three and a half hours which, under ordinary circumstances, could not be surmounted in six, even by a good mountaineer.

In a short time fifteen stalwart guides, with a plentiful supply of ropes, reached the scene of the accident. Moser, the eldest guide present, took the command. The crevasse was first examined. It was about a yard and a half across, and widened out

considerably at the bottom. The place where Sachs had fallen through was marked by a hole just large



A GLACIER.

enough for a man's body to pass. Then one of the guides bent over the opening and shouted down. He listened intently for a few seconds, then turning to

his companions, he cried joyfully, "The gentleman lives!"

Such a possibility had never entered their thoughts, and they received the news doubtfully. Indeed they had brought sacks with them in full anticipation of having to take down a corpse. Others bent down and shouted. There was no answer. Several anxious moments were passed, and again the shout "Are you alive?" was thundered out. "I am alive, and have only broken my arm," came in a hollow voice from the depths.

A warm dispute took place among the guides, each of whom wished to have the honour of being let down into the awful chasm. This difficult question was at length decided by the choice falling on Joseph Kronig, the lightest man of the party. A rope was tied round him, and he was lowered. One glacier-rope length was paid out, another was tied on and speedily lowered, and a third was required before Sachs was reached. This indicated a depth of about two hundred feet.

The guide found Sachs sitting on a snow-covered bank of ice, above a still deeper ice abyss, which seemed to be fathomless. On seeing his deliverer he coolly called out, "Good-evening; how do you like it down here?" A second rope was lowered, and as

Sachs was a heavy man, a third was deemed necessary, to guard as far as possible against any chance of further mishap. Kronig fastened the rope about him securely, and he was raised. He had nearly reached the upper layer of snow, when it appeared almost impossible to get him to the top, for the ropes cut deep into the snow. At last a guide seized his coat collar and dragged him over by sheer force.

"Thank God!—so I'm out?" cried the rescued man.

When Kronig was hauled up from the ice tomb Sachs was examined by the doctors. His right arm hung helpless by his side, there was an ugly wound on his head from which the blood still flowed, and his chest and limbs were severely bruised. A little refreshment was then given him, and the downward march commenced. The Trifthütte was not reached till eleven o'clock at night. Here Sachs was bound and plastered, and his sprained shoulder was set. Next morning they returned to Zermatt.

His story of what happened after he disappeared from the view of his guides is very interesting.

"After the fall, I was unconscious for a long period. When I came to myself I found I was alone on an ice bank. I cried for help again and again, but all in vain. I took off my gloves and sat on them, as a protection from the terrible cold. The ice chamber

in which I was was like a vault above me, and to reach it I must have fallen from one ice ledge to another. To this circumstance I probably owe my life, for had not my fall been broken I must inevitably have been dashed to pieces.

"I counted the hours as they passed, and in imagination measured the distance which would have to be traversed by those who came to my rescue. To while away the dreary hours I tried to make notes in my pocket-book, but thoughts of my wife drove away all others. The chief thing, of course, was to keep awake, and that was no easy matter; but I did it. Never shall I forget how, in spite of agonising thirst and suffering, I struggled against sleep for seven long hours. At last— But I cannot describe my feelings when I knew that help was at hand."

His escape from death in the first instance and his subsequent rescue had alike been extraordinary.

THE END.

STORIES OF
BALLOON ADVENTURE



Frontispiece.]

DROPPED FROM THE SKY.

[See page 107.]

PREFACE

IN the following pages will be found brief narratives of some of the more famous incidents and exciting episodes which mark the history of ballooning. No attempt has been made at a consecutive account of the progress of aerostation, and as far as possible no technical terms have been used, except those which were found to be absolutely essential to exactness in description. In the choice of incidents I have been chiefly guided by the presence of adventure, and by the relative importance of the incident to the subject as a whole.

F. M.

December 1897.

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STORIES

OF

BALLOON ADVENTURE

CHAPTER I.

THE FIRST BALLOONS.

"Oh, what a dainty pleasure 'tis
To sail in the air!"



WHO first navigated the air? is a question which it is by no means easy to answer. The desire to partake of this "dainty pleasure" seems to have taken a strong hold upon the human mind at a very remote period, as shown by the story of Dædalus, the celebrated Grecian sculptor and architect. While imprisoned in Crete he made wings for himself and his son Icarus, with which to fly across the sea. He is said to have accomplished the flight in safety; but Icarus flew too near the sun, the heat of which melted

the wax with which his wings were fastened on, and he fell headlong into the *Ægean Sea*.

In subsequent ages, the idea of flying was the basis of all attempts to make a passage through the air. Men thought that by elongating their arms with a broad mechanical covering, they could convert them into wings, and fly like birds; but they forgot that birds possess air cells which they can inflate, that their bones are full of air instead of marrow, and in their ignorance they launched themselves from towers and other high places, and came crashing to the earth. Some paid the penalty of death for their wild and daring adventure; others, like the Monk of Malmesbury, of whom Milton tells, lived to attribute their failure entirely to their having forgotten to put on a broad tail of feathers.

To the brothers Stephen and Joseph Montgolfier belongs the honour of having solved the problem of aerial navigation. They were paper-makers by trade, and in their experiments naturally fixed upon paper as the most suitable material for making balloons. After many trials, they at length succeeded in 1783 in raising a balloon, thirty-five feet in diameter, to a height of fifteen hundred feet. It was nearly spherical in shape, and was made of linen cloth covered with paper. The gas which caused the balloon to ascend

was made by burning moist straw and wool on an iron brazier, placed beneath the opening.

The news of this marvellous achievement spread quickly throughout France, and so great was the excitement that a subscription was raised in Paris to



THE BROTHERS MONTGOLFIER.

construct a "Montgolfière," as the first balloon was called. There lived at this time in the French capital a young scientist named Professor Charles, and he determined to share the glory and wealth which seemed likely to fall to the share of the Montgolfiers.

He accordingly constructed a spherical balloon of varnished silk which he inflated with hydrogen gas. On the 27th of August 1783 it ascended from the Champs de Mars in the presence of three hundred thousand spectators. About an hour later it fell in a field at Gonesse, about fifteen miles off.

The consternation which its descent caused is thus described—

“It is supposed by many to have come from another world; many fly, others, more sensible, think it is a monstrous bird. After it has alighted, there is still motion in it from the gas it still contains. A small crowd gains courage from numbers, and for an hour approaches by gradual steps, hoping meanwhile the monster will take flight. At length, one bolder than the rest takes his gun, stalks carefully to within shot, fires, witnesses the monster shrink, gives a shout of triumph, and the crowd rushes in with flails and pitchforks. One tears what he thinks to be the skin, and causes a poisonous stench; again all retire. Shame, no doubt, now urges them on, and they tie the cause of alarm to a horse's tail, who gallops across the country, tearing it to shreds.”

Absurd as it seems to us, the Government caused a proclamation to be sent throughout the country

CHARLES'S BALLOON ON ITS WAY TO THE CHAMP DE MARS.



explaining to the inhabitants the nature of balloons, and begging them not to be alarmed.

In the following month, Montgolfier exhibited his fire-balloon before the king at Versailles. The performance was but a qualified success. The balloon descended only two miles away, and was much slower in its motions than that of Charles. The ascent, however, had a certain scientific value. The great discussion of the time was whether it would be possible to breathe at a certain distance from the earth. Montgolfier accordingly sent up a sheep, a cock, and a duck in a cage attached to his balloon. They came down in safety, and without having sustained any injury on the voyage. These were the first aërial travellers.

The balloon, or "large ball," was now an accomplished fact, and serious discussion followed as to whether it could be adapted for service as an air-ship for bearing men aloft as passengers. How this was done, and the subsequent advances in the adventurous science of aerostation, we propose to show in the following pages.

CHAPTER II.

EARLY ASCENTS.



It is remarkable that the man who was gifted with the ingenuity to make the first balloon had not the daring to trust his life to his own invention, and the honour of being the first in the long list of adventurers in the air fell to a stranger. The man whose name was thus destined to be famous was Pilâtre de Rosier, a professor in the French Museum. He made the acquaintance of Montgolfier, and suggested to him what was at that time a most daring project—to attach himself underneath one of the fire-balloons. Seeing in this a means to gain the popularity which Charles had deprived him of, Montgolfier gladly consented, and preparations were set on foot for the sensational performance.

For this experiment Montgolfier constructed a special balloon, forty-six feet in circumference, and

sixty-six feet high. It was richly decorated with drawings of eagles and wreaths. From it was suspended a circular gallery by a multitude of cords. In the middle of the lower opening of the balloon a kind of grate was suspended. In this were placed straw and rags moistened with spirits of wine.

The details of the first attempt, though insignificant in comparison with what has since been accomplished are not without interest. The Montgolfière, we are told, ascended as high as the ropes—purposely placed to detain it—would allow, which was about eighty-four feet from the ground. He remained at this altitude for four minutes and twenty-five seconds, by throwing straw and cloth into the grate, and setting them on fire before the eyes of the dismayed spectators. When “the intrepid adventurer returned from the sky,” the experiment was pronounced to have been a great success.

Pilâtre was by no means satisfied with his experience, and boldly announced his intention of making a proper aerial voyage, in a free balloon. Accordingly, on the 21st of November 1783, an ascent was made from the Bois de Boulogne. Pilâtre was on this occasion accompanied by the Marquis d'Arlandes, who afterwards wrote an account of “the first journey attempted by man through an

element which, previous to Montgolfier's discovery, seemed but little fitted to support him."

The balloon rose majestically to the height of about three hundred feet over Paris; but it would speedily have descended had not the fire been constantly fed



ROSIER'S BALLOON.

with straw. As they were sailing over the city, the aeronauts were startled by a loud report, and on looking up to see what had caused the noise, they were horrified to find that the balloon was on fire.

"I saw," says the marquis, "that the part turned

towards the south was full of holes, some of which were of a considerable size. At the same time, I took my sponge and quietly extinguished the little fire that was burning some of the holes within my reach; but at the same moment I noticed that the bottom of the cloth was coming away from the circle which surrounded it."

In spite of the insecure state of their machine, the two daring travellers kept on their way till they reached the outskirts of the city, when they descended in safety. They had been among the clouds for twenty-five minutes. Thus ended the first trip in a free balloon.

But the year 1783, so fertile in the history of ballooning, did not pass away without witnessing a more wonderful performance. Pilâtre's ascent had restored the Montgolfiers to the height of popularity, and Professor Charles and his balloon were momentarily forgotten. He therefore made up his mind to outshine his rivals, and set to work to prepare a sensation for the people of Paris.

He constructed a balloon of alternate strips of red and yellow silk, coated with indiarubber varnish. The car was of basket-work, covered with cloth painted in blue and gold, trimmed with tassels of gold and cords of silk, and was suspended from a net

which covered the upper part of the balloon. A valve was fitted at the top and worked by a cord from below to allow the gas to escape when it became necessary to descend, and ballast was carried in the form of sand-bags. A barometer fastened to the car completed the outfit of this the first complete aërial machine. So detailed were the arrangements in the *Charlière*, as the hydrogen balloon was called, that for a hundred years no essential change or improvement took place on Professor Charles's invention.

On the 1st of December, Charles made an ascent from the gardens of the Tuilleries, accompanied by a friend named Robert. The balloon rose very gently in a horizontal direction and quickly reached an elevation of eighteen hundred feet.

Then the wind carried them towards Nesles. Throughout the voyage, which occupied two hours, the temperature was agreeable, and the aeronauts had not the slightest apprehension for their safety. "Finally," says Charles, "we arrived at the plain of Nesles, twenty-seven miles from Paris, and prepared to descend towards a vast meadow. Some trees and shrubs stood round its border, and, fearing that their branches might damage the car, I threw over two pounds of ballast. We rose again, and ran along more than a hundred yards at the distance of one or

two feet from the ground, so that we had the appearance of travelling in a sledge. The peasants ran after us without being able to catch us, like children pursuing a butterfly in the fields. At last we stopped and were instantly surrounded. Nothing could equal the simple and tender regard of these country folk, their admiration and their lively emotion."

The aeronauts alighted from the car to receive the congratulations of those who hurried to the spot. There was still a large quantity of gas in the balloon, and Charles in the wild delight of success took it into his head to ascend alone. He stepped into the car, and ordered the peasants to let go their hold. The balloon shot up into the air with lightning rapidity, for he had forgotten to take in ballast to compensate for the weight of his friend.

"I passed in ten seconds," he says, "from the temperature of spring to that of winter. The cold was keen and dry, but not insupportable. I examined all my sensations calmly; I could hear myself live, so to speak, and I am certain that at first I experienced nothing disagreeable in this sudden passage from one temperature to another."

Soon, however, he began to experience the intense cold. His fingers became numbed, and he was conscious of violent pains in his ears and face

"After being twenty-five minutes in the air, I began to descend, and on arriving at twenty-three fathoms from the earth, I suddenly threw over two or three pounds of ballast, which I had carefully kept for this purpose. I then slowly descended upon the ground which I had, so to speak, chosen."

It is probable that in this ascent Charles reached a height of four thousand yards, or rather more than two miles, a height which, without being dangerous, is quite sufficient to cause the aeronaut strange feelings, especially if he has travelled at the speed of an express train "rushing from the earth to the moon and stopping at the first station." Strange to say, Charles never again trusted himself in a balloon, and for the remainder of his days rested contentedly on the laurels he had won.

Far different was it with the intrepid Pilâtre de Rosier. In the following year he made an ascent in a Montgolfière from Versailles, and alighted at Compiègne, forty miles away. This was the longest journey ever performed in a fire-balloon. During this trip, he reached a height of 11,732 feet above the earth. "We perceived beneath us only enormous masses of snow, which, reflecting the sunshine, filled the firmament with glorious light."

But Pilâtre was more a man of science than an

adventurer, and he longed to devote his talent to some other account than that of mere theatrical display. By combining the Charlière and the Montgolfière he hoped to be able to take advantage of whichever current of air would carry him to a fixed destination. His idea was that the hydrogen balloon could support the fire-balloon, while the latter with a small quantity of fuel could cause an ascent or descent at will.

On the 15th of July 1785, Rosier ascended in his aero-Montgolfière, a fire-balloon ten feet in diameter suspended from an air-balloon thirty-seven feet in diameter. After being up for about half an hour, and when at a height of about three thousand feet, the balloon exploded. The unfortunate aeronaut was precipitated to the ground, a mangled mass. Thus perished the first martyr to the science of ballooning, and by a strange coincidence, he was "the first mortal to navigate the air."

CHAPTER III.

THE FIRST ASCENT IN ENGLAND.



THE Chevalier Vincent Lunardi, a young Italian, is distinguished as the "first aërial traveller in the English atmosphere." He made his famous voyage on the 15th of September 1784. He was at this time secretary to the Neapolitan Ambassador, and, fired by an ambition to accomplish in England what had already been done in France, he applied to Sir George Howard, the governor of Chelsea Hospital, for permission to launch his balloon from the grounds of that institution, "as from the altar of humanity to ascend the skies."

He did not possess sufficient money to construct a balloon, and in order to raise the necessary funds, he proposed that each subscriber of one guinea should be allowed to view the construction of his wonderful machine on four different occasions, besides having a

chair near the globe on the day of ascending. Half a guinea entitled the subscriber to view the construction twice and to a seat on a bench near the chairs. After all expenses had been paid, he further suggested that the balance of the money obtained should be divided among the pensioners at the Hospital. The matter was submitted to King George the Third, and he graciously gave permission for the use of the grounds.

For a time all went well. Lunardi obtained the support of several of the leading men of the day, including Sir Joseph Banks, President of the Royal Society. In the enthusiasm of the moment, Lunardi wrote to a friend: "England is open to all the world, either in war or peace; and a man of talent, whether liberal or mechanic, cannot fail of support and encouragement in proportion to his merits. When once a circumstance in the situation or character of a stranger has attracted the attention of an Englishman, and he has declared himself his protector and friend, a reliance may be had on his sincerity, and the friendship is permanent in duration as it is slow in growth."

Shortly afterwards, however, he describes himself as being overwhelmed with "anxiety, vexation, and despair." A Frenchman named Moret had advertised

an ascent, and about sixty thousand people assembled to witness it. They patiently waited for four hours for the filling and ascension of the balloon; but in spite of every attempt the globe absolutely refused to rise. In their disappointment the people imagined the whole affair to be an imposture, and they rushed in and tore the balloon to pieces.

This unfortunate accident seriously affected Lunardi's prospects. He too was a foreigner, and was consequently regarded as a colleague of Moret, and therefore an impostor. Fearing the consequences of failure, the permission which had been given him to use Chelsea Gardens was withdrawn. Nor could he obtain leave to make an ascent from private grounds, and it seemed as if the venture in the meantime must be given up.

Though sorely disheartened, he continued his attempts to obtain a site, and some idea of his tenacity of purpose may be had from the fact that he declared that, rather than be beaten, he would launch his balloon from the street. At length the grounds of the Honourable Artillery Company were placed at his disposal, and he hurried on his preparations with all possible speed.

On the appointed day a hundred and fifty thousand spectators assembled to witness the great marvel.

The Prince of Wales was present, and watched the filling of the balloon with the greatest interest, all the time asking many questions and expressing concern for the safety of the aeronaut. The catastrophe which Lunardi had all along dreaded, namely, that of some hitch in the proceedings which might arouse popular indignation, was very nearly taking place.

The process by which the balloon was filled with hydrogen gas was slow and elaborate, and at the time fixed for the start the balloon was not half inflated. For some considerable time the crowd waited patiently, but then they became indignant at the delay. Fearing to provoke the impatient and impetuous people, Lunardi decided to ascend, though the inflation was not completed.

His balloon was made of oiled silk in alternate strips of blue and red, and measured a hundred feet in circumference. The car was simply a platform surrounded by a railing about four feet high. The balloon was provided with wings and oars; the wings to give it motion, if becalmed, by agitating the air, and the oars to raise or lower it at will, without having to use the valve.

He took with him in the car a pigeon, a dog, and a cat. At two o'clock the last cord which bound him

to earth was severed, and the balloon rose gracefully from the Artillery Ground, "amid the most unfeigned acclamations and applause. The multitude were more than satisfied, and passed at once from incredulity and menace to the most extravagant expressions of approbation and joy." Even among those who did not witness the actual ascent, the utmost enthusiasm prevailed. It is even stated that the king, who was in conference with his ministers when the balloon was reported to be passing, broke up the council with the remark that they could resume their deliberation later, but that they might never have another chance of seeing Lunardi.

Shortly after having started, the pigeon escaped, and one of the oars broke and fell to the ground. A young lady who saw the oar fall thought it was the body of the aeronaut, and was so affected that she died the following day.

Lunardi describes his sensations with graphic detail, and it is interesting to note that they are exactly similar to those experienced by all aerial travellers, who naturally expect some extraordinary sensation in rising from the earth. The ascending motion was, however, altogether imperceptible, and instead of the balloon going up, he felt as if the earth had, by some unaccountable effort of nature, been

suddenly precipitated from its hold, and was gradually sinking into the depths of some mighty abyss below.

As the earth gradually receded, the objects on it became less and less, but as they diminished in size they became more distinct and defined. The streets appeared as lines all animated with dots, which were really men and women. The great metropolis itself appeared like a table set out with toys—baby houses, pepper castors, extinguishers, with here and there a dish-cover—things which are called domes and spires and steeples. The Thames appeared as a small winding rivulet; while the largest vessels were no more than flat, pale decks, like pieces of driftwood on the water.

Enraptured with the prospect, Lunardi wrote: "It seemed as if I had left below all the cares and passions which molest mankind. I had not the slightest sense of motion in the machine. I knew not whether it went swiftly or slowly, whether it ascended or descended, whether it was agitated or tranquil; but by the appearance or disappearance of objects on earth."

Shortly after three o'clock the balloon descended in a cornfield on the common of South Mimms. Here he landed the cat, as the poor animal had

suffered severely from cold. Having witnessed his descent, some people came to his assistance; but, wishing to obtain a second triumph, he ordered them to stand clear. Then throwing out all his provisions and ballast, he made a second ascent. He rose very rapidly, and in a few minutes the car was fringed with icicles.

"Floating clouds filled up all the space beneath. Lovely colours outspread themselves, ever varying in tone and form,—now sweeping in broad lines, now rolling and heaving in huge, richly, yet softly tinted billows,—while sometimes through a great opening, rift, or break appeared a level expanse of grey or blue fields at an infinite depth below. And all this time there fell a noiseless cataract of snowy cloud-rocks, falling swiftly on all sides of the car in great fleecy masses, in small snow-white and glistening fragments—all white and soft and swiftly rushing past giddily and incessantly; down, down, and with all the silence of a dream, strange, lustrous, majestic, incomprehensible."

On this ascent Lunardi obtained his highest elevation, and at twenty minutes past four descended in a meadow near Ware in Hertfordshire. He called on some labourers who were at work in a field to help him to descend, but they were too much terrified to

do anything but stare at him open-mouthed. At length a young woman took hold of one of the cords which he had thrown out and called on the men to assist her. They had by this time got over their astonishment and assisted to drag the balloon to the earth.

The aeronaut was then taken to the house of Mr. Baker, the member of Parliament for Hertford, who treated him "with frank and generous hospitality."

The voyage had terminated favourably, but Lunardi had to pay the penalty of his success, in a severe fit of sickness brought on by the reaction after the weeks of suspense, contempt, and fatigue which he had undergone. When he recovered he was "the star of the hour." He was everywhere received with applause, respect, and friendship. The Prince of Wales presented him with a handsome watch, and he was received at court by the king, who expressed a warm interest in his adventures and personal safety.

Lunardi made several successful ascents after this in different parts of the kingdom, and at a subsequent period in Italy. The favourite of kings and princes, however, died at Genoa in 1806 in a state of great poverty.

CHAPTER IV.

ACROSS THE CHANNEL.



OWARDS the close of the year 1784, the inhabitants of the ancient port of Dover were in a state of great excitement, for it was whispered about that an attempt was to be made to cross from Dover to France by balloon. At this time it was the chief ambition of French aeronauts to achieve the first passage across the Channel, and the remembrance of Lunardi's ascent was still fresh in men's minds, so that the preparations for the daring undertaking were watched by the townsfolk with more than usual interest.

In the courtyard of Dover Castle, a wooden staging was erected to support the balloon, and arrangements were made for starting on the 1st of January 1785. A few days before this date, the celebrated French aeronaut, Blanchard, arrived to complete his preparations. He was accompanied by an American doctor

named Jeffries, who provided all the necessary funds, in return for a seat in the car.

Blanchard was very anxious to make the ascent alone, but the doctor was determined to accompany



M. BLANCHARD.

him, even in spite of the clause which the aeronaut introduced into their agreement in the hope of shaking off the persistent medico. By it Jeffries bound himself, on his word of honour as a gentleman and an officer, to jump out of the car the moment his further

presence and weight should jeopardise the success of the venture and imperil Blanchard's life.

On the date fixed for the ascent, the wind was blowing steadily from the east. It was therefore impossible to start, and it was not until the 7th of January that a favourable breeze was obtained. Then Blanchard announced to the mayor of Dover that it was his intention to start. In order to give notice to the inhabitants, the governor of the castle ordered three cannons to be fired at half-past eight in the morning, and the whole population of Dover, together with a great number of strangers, crowded down to the beach in the greatest expectancy.

At ten o'clock the aeronauts made their final preparations by testing the strength of the netting, and the safe condition of the balloon itself. In the car were nine little bags filled with sand, a barometer, a thermometer, a compass, some provisions, and two magnificent flags emblazoned with the arms of England and France.

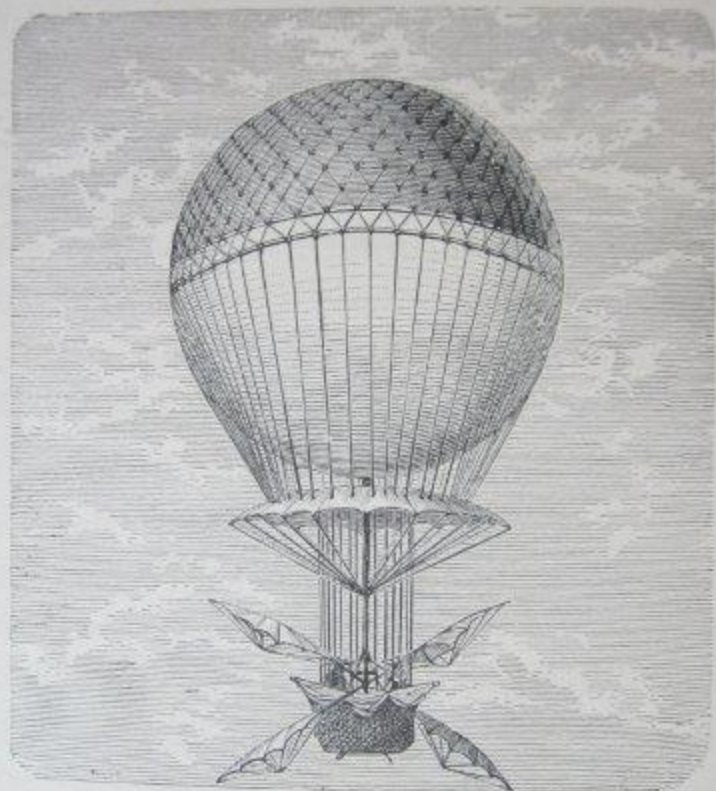
Three hours later, Blanchard and Jeffries entered the car. They were dressed alike, "in a sort of brown woollen slop, waistcoat of the same material, knitted drawers covering the feet, and tight ankle boots. They both wore leather gloves and a scarlet woollen comforter twisted several times round their

necks. Blanchard had a cap of light grey plush, covering his ears, Jeffries a thick sailor's cap. He also wore a light girdle of silk, to which were fastened his watch and his handkerchief, and beneath which the form of his favourite snuff-box was evidently apparent.

At a quarter-past one the balloon was released from its fastenings; but the weight of the car proved too great, and it slowly sank instead of ascending. By throwing overboard nearly all the ballast, however, it rose gently, and drifted over the Channel, followed by the cheers of the assembled spectators. The crowd gazed after the balloon till it appeared as a mere speck in the heavens, while those who were the happy possessors of telescopes were eagerly questioned as to what was going on. Suddenly the balloon descended as it were into the sea, and when this was made known, a cry of horror arose; but it soon was seen ascending, and shortly afterwards it quite disappeared from view.

We will now accompany the aeronauts in their adventurous flight across the Channel. For a time all went well, and they greatly enjoyed the consternation which their appearance caused among the crews of several vessels over which they passed. When about a third of the journey was accomplished, they

found that they were rapidly descending, and at once threw out the remainder of the ballast. The advantage gained was but momentary, for shortly afterwards the rising of the mercury in their



BLANCHARD'S BALLOON.

barometer denoted that they were again descending. Again they lightened the car by throwing out their books and provisions. The French coast was now in sight, and success was well within their reach; but again the balloon approached perilously near the

water. Hastily everything that remained in the car was thrown out, and when this did not prove enough, the aeronauts stripped themselves of all but their most necessary garments. Then the balloon slowly ascended.

We can readily imagine the feelings which were uppermost in Jeffries' mind at this moment. The question "What shall be dispensed with next?" must have caused him to shudder. Fortunately he was not called upon to sacrifice himself, for the balloon rose rapidly, and exactly two hours from the time of starting, passed over the high ground between Cape Blanc Nez and Calais, "and it is remarkable that the balloon at this time rose very fast, so that it made a magnificent arch."

In passing over the forest of Guines, the two adventurers descended as low as the tops of the trees, and Dr. Jeffries seized hold of one of the uppermost branches and brought the balloon to a standstill. The great machine then became fast between a couple of oaks, and the aeronauts got out of their car by the aid of the branches. When they reached *terra firma* their feelings seem quite to have overcome them, for, we read, "they fell on each others' necks." They were in a state of excitement closely bordering on madness. After they had embraced one another,

Jeffries shouted out, "Oh, look, look! you have now standing before you the two most celebrated men in all France or England." And Blanchard added, "Yes, indeed, the most celebrated men in the whole world." Their only audience was the trees.

Meanwhile two little boys who had witnessed the descent ran off and aroused the inhabitants of the village, who now came flocking to render assistance to the daring men, and offer them hospitality, which was very welcome, for both Blanchard and his companion were suffering severely from cold and hunger. When they were sufficiently refreshed they proceeded to Calais, where they were welcomed as heroes. Every honour, even to the freedom of the city, was conferred on Blanchard. The King of France commanded him to appear at court, and His Majesty awarded him a pension of fifty pounds.

CHAPTER V.

FLOOD AND FIRE.



ONE of the most remarkable figures in the story of balloon experiment and adventure is Count Zambeccari of Bologna. A sailor by profession, he fell into the hands of the Turks in 1787, and was kept a close prisoner in the Bagnio at Constantinople for three years. He had already made several uneventful voyages in the clouds, and during his long captivity, he dreamed of means of guiding himself once more upon the waves of air. His idea was that by burning oil or spirits of wine under an inverted parachute, a balloon could be made to ascend ten times higher and ten times more rapidly than by the simple method of throwing sand overboard.

Accordingly, when he regained his liberty, he hastened to England in the hope of obtaining the

funds necessary for the experiment; but in this he was disappointed. The danger of fire was a risk too great to be overlooked in his proposals, and so his scheme was not regarded with favour. But to such a man as Zambecari, fear did not exist. He therefore made his way to his native Italy. At Bologna he succeeded in raising the money, and an ascent was arranged in company with Dr. Grassetti and Pascal Andreoli.

The ascent took place at night, in a fire-balloon, which Zambecari had made more dangerous and complicated than it was already, by the addition of a rudder. The intention of the aeronauts was to take advantage of the strong north-east wind which was blowing and journey to Milan. They took with them instruments and a lantern by which to make observations.

The departure was badly regulated, and from the first misfortune followed them. The lamp, which was intended to increase their power of ascent, became useless, and the light of their lantern was too feeble to enable them to observe their instruments. The balloon ascended with great rapidity, and in an incredibly short time they found themselves in a region of excessive cold. The suddenness of the change of temperature, coupled with the fact that

Zambeccari had scarcely broken his fast for twenty-four hours, produced their natural result. He fell on the floor of the car in a deathlike faint. Grassetti also became unconscious. Andreoli alone preserved his senses; but even he suffered excessively. His whole attention was now occupied in trying to revive his companions. Zambeccari was the first to recover, and like a man newly awakened from a dream, asked his companion—

“What is the news? Where are we? What time is it?”

Andreoli answered that the compass was broken and their whereabouts was therefore a mystery; but as he spoke, a sound, muffled and almost inaudible, fell on his ear. “Ah, the breaking of waves!” he cried. In fearful anxiety the two men listened. It was now about three o’clock in the morning, and the balloon was slowly descending through a layer of whitish clouds. The noise of waves, tossing in wild uproar, became louder and louder. The next instant the horrified aeronauts saw the sea below them violently agitated. Zambeccari seized a large bag of sand; but, before he could throw it overboard, the car touched the waves, and the waters of the Adriatic poured through the slender basket-work.

The panic-stricken aeronauts blindly cast out

everything they could lay their hands on. Without a word being spoken, without pausing to think what would be the consequences, they threw into the sea their money, instruments, ballast, and clothing. Still the balloon did not rise. Then with knives they set desperately to work, and cut away everything that was not absolutely necessary to the balloon. Thus lightened, they ascended with fearful rapidity to such a prodigious elevation, that they had great difficulty in hearing each other, even when shouting at the top of their voices.

The adventurers suffered severely. They were suddenly covered with a coating of ice; Zambeccari's fingers were frozen and he could no longer make use of his hands, Grassetti lay in the bottom of the car hardly showing any signs of life, Andreoli bled profusely. On a parallel with them, the astonished men saw the moon shining, red as blood. After traversing these elevated, icy regions for about half an hour, the balloon again fell into the sea. It was pitch dark, and the aeronauts, worn out by what they had already endured, abandoned themselves to the fate which seemed inevitable. The balloon was now more than half empty, and acted as a sail, which dragged the car through the waves. Often it was entirely covered with water.

At length the welcome daylight appeared, and showed the half-drowned men that they were within four miles of the shore, and rapidly driving towards it. But they were again doomed to disappointment. Suddenly a land wind sprang up, and carried them out to sea. Some boats put off from the shore, and for a time the hope of rescue lightened their hearts; but when the sailors came near enough to make out the curious object, they made all sail to get away from the spot as quickly as possible.

"It was now," says Zambeccari, "broad daylight, but all we could see was the sea, the sky, and the death that threatened us." Fortunately, at the last moment a vessel hove in sight, and the captain, better informed than the others, saw at once what had happened, and sent his boat to their rescue. The sailors threw the weary adventurers a stout rope, which they had only sufficient strength to fasten to the car. They were drawn on board fainting with exposure. Their perilous voyage had occupied eight hours.

Relieved of the weight of the aeronauts, the balloon rose at once into the air, in spite of the efforts of the sailors to capture it. The boat received a severe shock from its ascent, as the rope was still attached to it, so the sailors hastened to cut themselves free. At once

the balloon mounted with incredible rapidity, and was lost in the clouds, where it disappeared for ever from their view.

The captain of the vessel did everything in his power to relieve the suffering of his guests. He carried them to Ferrara, and they made their way to Pola, where they were welcomed with great kindness. Here Zambeccari had to have his frozen fingers amputated.

In spite of this terrible warning, the adventurous sailor-aeronaut was determined to make another experiment with his spirit-lamp. Accordingly, on the 21st of September 1812 he made an ascent from Bologna, along with a companion named Signor Bonaga. The upward journey was accomplished in safety and without adventure. On descending, however, the grapnel caught suddenly in a tree. The suddenness and violence of the shock overturned the lamp and set the whole machine on fire. The two men instantly jumped from the car. Bonaga was picked up fearfully injured; but he escaped with his life. Zambeccari was killed on the spot.

CHAPTER VI.

THE FATHER OF MODERN BALLOONING.



HE most remarkable figure in connection with ballooning in England is that of Charles Green. His career lasted for thirty-six years, during which he made fourteen hundred ascents. Three times he crossed the sea, and twice he fell into it. To him are due two important improvements in the management of balloons—the use of ordinary coal gas for inflation, and the introduction of the guide-rope. This is a rope several hundred feet long, which is allowed to hang downwards from the car, and by means of which the aeronaut is able to regulate the height to which his balloon rises. If the balloon sinks very low, a considerable length of the guide-rope rests on the ground. The balloon, thus lightened, rises again. If it ascends too high, the weight of the rope tends to bring it down again, and so a uniform elevation is rendered possible.

Green with his unique experience reduced ballooning to a routine, and few accidents attended his ascents, which were not, however, without adventure. The greatest of all the veteran's dangers, however, was caused by a most malicious trick, the perpetrator of which was unfortunately never discovered.

In the year 1832 he ascended from Cheltenham. The balloon rose from the ground steadily; but no sooner was weight put on the car, than it fell over, and the contents were thrown to the ground. Some one had partially cut the ropes of the car in such a way that the damage was not noticed till its effects were experienced. The aeronaut and his companion had only time to seize hold of the hoop to save themselves from being dashed to the ground. The balloon flew upwards with frightful velocity, and before Green could obtain possession of the valve string, which the first violence of the accident had placed beyond his reach, an altitude of upwards of ten thousand feet had been reached.

Their danger was terrific. They clung to the hoop with desperate energy, not daring to trust any portion of their weight upon the margin of the car, which hung suspended by a single cord beneath their feet. Their only hope of safety lay in their ability to hang on till the exhaustion of the gas made the balloon

descend. To the horror of their situation a fresh danger was added. Under the strain of the unequal pressure the network which covered the globe began to give way. Mesh after mesh broke with a succession of reports like the discharge of a pistol. Through the opening thus created, the balloon began to ooze slowly out, and presently took the form of a huge hour-glass floating in the upper air. Truly a singular and awful spectacle.

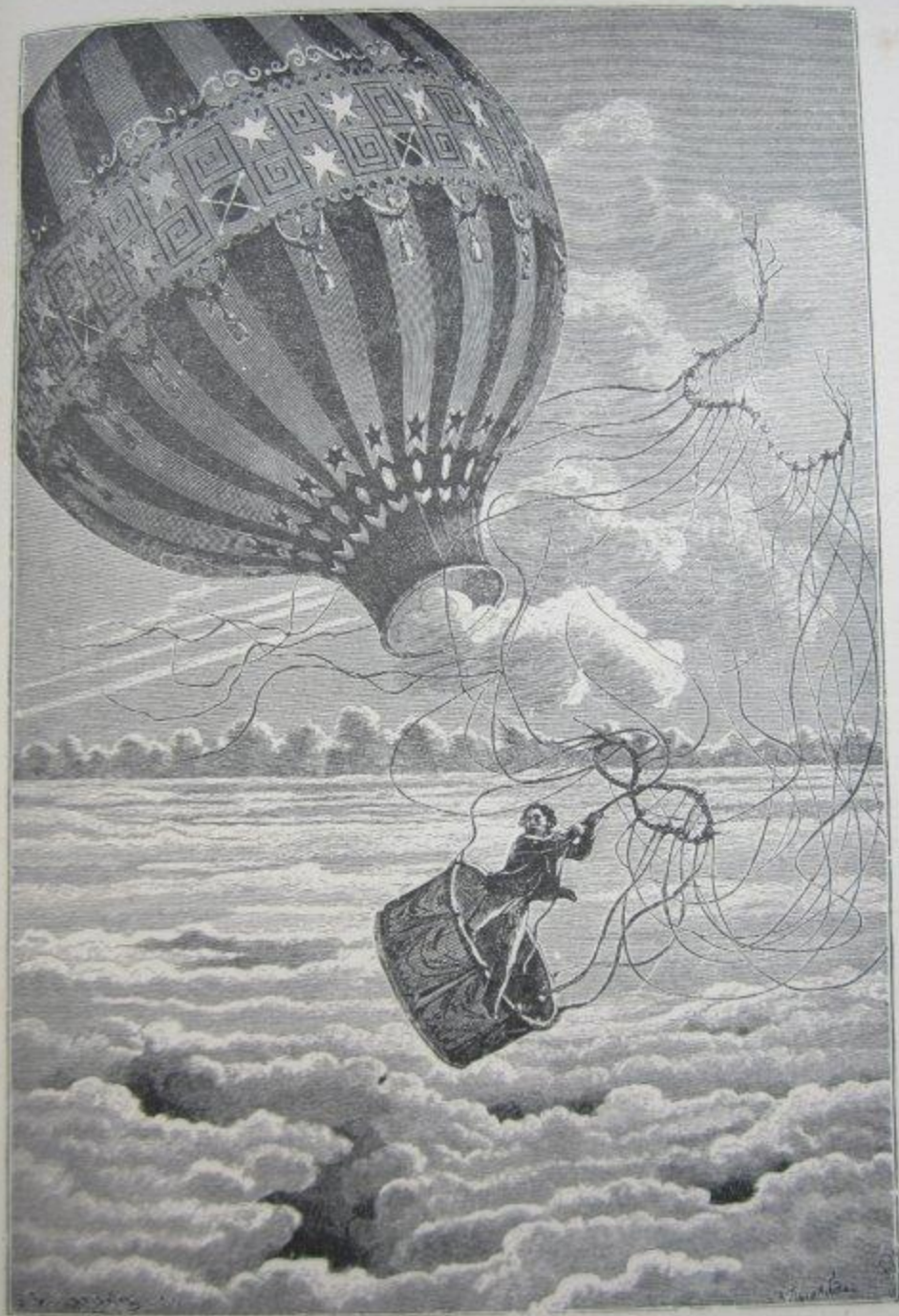
Thus the aeronauts hung for a considerable time, expecting every moment to be hurled to the earth by the escape of the balloon. At length they began to descend. When within a few feet from the ground, the catastrophe they had so long dreaded took place—the balloon, forcing its way through the netting, escaped with a loud explosion, and the aeronauts fell to the earth insensible. It was at first feared that they were dead; but with great difficulty they were at length restored to consciousness and health.

Green's balloon, one of the most famous and longest-lived aerostats of which any record has been kept, was called the "Great Nassau," and it received its name after accomplishing a most remarkable journey from London to Germany. It was constructed by Green himself of the finest silk, specially spun, woven, and

dyed. It was pear-shaped, sixty feet in height, fifty in breadth, and had a capacity of eighty-five thousand cubic feet. The car measured nine feet long and four broad. It was oval in shape, and the bottom was fitted with a cushion, which could be used as a bed if necessary.

On the 7th of November 1836, Green, accompanied by two friends, Mason and Holland, set out. They carried a fortnight's provisions, and, not knowing to what quarter of the Continent they might be blown, they had provided themselves with passports to every country in Europe. Borne on a fresh breeze, the balloon sailed in a south-easterly direction over Kent, and at four o'clock, three hours after they started, they came in sight of the sea. They now came under the influence of a current setting towards the north, which would inevitably have carried them out over the open sea. A quantity of ballast was therefore thrown out, and the balloon rose until a favourable stream of south-western air was reached.

Without a thought of danger the voyagers left England and floated above the Channel. Behind them, the white cliffs sparkled with many lights; below, the water was dotted here and there at great distances with vessels whose lights glimmered and twinkled like distant stars as the ships rose and fell



DEATH OF AN AERONAUT.
61

on the waves; before them hung a huge black cloud-curtain, stretched from sea to sky as though to bar their farther advance. Into its folds they plunged, and then they heard nothing, saw nothing, till at the end of an hour the well-known lights of Calais shone ahead.

Preparations were now made to pass the night in as great safety and comfort as possible. A lamp was lighted and hung so as to prevent all danger of explosion, and the provisions were spread out. "With many a joke," says Mason, "touching the *high* flavour and *exalted* merits of our several viands, which, however agreeable under the circumstances, will not bear repeating, we contrived to do ample justice to the good cheer."

Darkness overhung the landscape, and for miles, as far as the eye could reach, nothing could be seen but clusters of lights indicating the position of a town, while away on the horizon glowed a dull red mist, like the reflection of some mighty conflagration, which when reached proved to be only the peaceful lights of a busy town. Streets, squares, and the whole plan of a town, drawn by the lamps, could be easily traced by the voyagers as the balloon hurried them from point to point.

"It would be difficult to give an idea of what sort

of effect such a scene in such circumstances produces. To find oneself transported in the darkness of night, in the midst of vast solitudes of air, unknown, unperceived, in secret and in silence, exploring territories, traversing kingdoms, watching towns which come into view and pass away again before one can examine them in detail, is grand—sublime.”

Towards midnight all signs of life disappeared, and, as is the custom in continental towns, the lights were extinguished. There was no moon, and the brilliancy of the stars served but to make the gloom more apparent. To the voyagers it seemed as if they were making their way through an interminable abyss. The solitude was profound. This, together with their ignorance of their whereabouts, heightened the novelty of their situation. Thus they sailed on till three o'clock in the morning, not, however, without considerable suffering from the cold, which froze all the liquors in the car.

Shortly afterwards, the aeronauts were startled by a sudden explosion. The silk quivered, and the car, violently shaken, sunk into the gloomy abyss. There was not time to ask “What’s happened?” when a second and a third shock followed, threatening to wrench the basket from its fastenings. It was afterwards found that one of the ropes, soaked with water

and made rigid by the intense cold, had yielded to the pressure of the expanding gas, and so caused the alarming shock.

When day dawned, the aeronauts looked anxiously abroad, in the hope of discovering their position, but without success. They accordingly decided to effect a landing at the first suitable spot. Their first attempt failed, for so great was the force of the wind near the earth, that the balloon was swept towards a wood, and accident was only averted by skilful handling. Another attempt was successful, and about seven o'clock in the morning the anchor held in a valley near the town of Weilburg in the duchy of Nassau. The journey of five hundred miles had occupied eighteen hours.

The hospitable Germans welcomed the wanderers with great enthusiasm, and before they left for England, one of their lady admirers bestowed on the trusty balloon the name of "The Great Balloon of Nassau."

"Thus," says Mason, "ended an expedition which, whether we regard the length of the journey or the time occupied in it, may justly be considered as one of the most interesting and most important ever undertaken."

One of Green's favourite and most frequently

quoted sayings was—"The best parachute is a balloon; the others are bad things to have to deal with;" and indeed he had good grounds for his opinion. On the 24th of July 1837 he ascended from London for the purpose of testing a new parachute. The inventor, Robert Cocking, thought he had discovered the true principle on which parachutes should be made. Previous to his time, they had been constructed so as to descend in a concave form, like that of an open umbrella. The aeronaut came down in a basket, not, as in more modern times, suspended from a ring, and the swinging was so violent during the descent, that sometimes the basket was almost in a horizontal position. Cocking determined to remedy this, and constructed a parachute in the form of a large inverted cone. The large upper rim was made of hollow tin, a most brittle and therefore unsuitable material.

Experts were by no means satisfied with Cocking's invention; but all they could say failed to shake his confidence in his parachute. Accordingly on the eventful day he went up dangling by a rope, fifty feet long, from the bottom of the car of Green's "Great Nassau" balloon. Knowing well what would happen the instant the great weight of the parachute was detached, the aeronaut provided a small balloon inside the car, filled with atmospheric air, and fitted with

two mouthpieces for himself and the friend who accompanied him.

Green made the trip sorely against his better judgment, and he was so ill at ease regarding the termination of the adventure, that he refused to touch the latch which was to free the parachute from the balloon. This presented no obstacle to Cocking, who procured a line of the required length and had it fastened to the latch above and led down to the basket of the parachute.

Considerable difficulty was experienced in rising to a suitable height, partly owing to the resistance to the air by the expanded parachute, and partly owing to its weight, which was about half a ton. At length, when the Great Nassau was over Greenwich at an elevation of about a mile, Green called out, "How do you feel, Mr. Cocking?" Though a distance of fifty feet separated the aeronauts, each syllable was heard with perfect distinctness in the silence of that region, of which they were for the time being the only inhabitants.

"Never better in my life," replied Cocking.

"But perhaps you will alter your mind," suggested Green.

"By no means," answered Cocking warmly; "but how high are we?"

"Upwards of a mile."

"I must go higher, Mr. Green. I must be taken up two miles before I liberate the parachute."

The aeronaut replied that this was impossible if he wished to descend by daylight.

"Very well," said Cocking; "if you will not really take me any higher, I shall say good-bye."

Again Green tried to save his friend from what he regarded as a foolish risk, and called out, "Now, Mr. Cocking, if your mind at all misgives you about your parachute, I have provided a tackle up here, which I can lower down to you, and haul you up into the car, and nobody need be the wiser."

"Certainly not, thank you all the same. I shall now make ready to pull the latch cord."

"Good-night, Mr. Cocking."

"Good-night, Mr. Green. A pleasant voyage to you; good-night."

There was a silence, as awful as it was perfect, and the aeronauts above felt a jerk upon the latch; but it was not sufficient to detach the parachute. There were a few seconds of intense suspense, then a vigorous pull was given—the balloon bounded aloft, and Cocking in his parachute descended slowly and steadily towards the earth. So far his invention fully realised his expectations. All went well for a few

minutes, when suddenly those below who were watching with glasses gave a loud cry of horror.

The parachute leaned on one side and then lurched to the other. The tin tubing had evidently given way, for the large upper circle collapsed. For a few seconds it was hid in a cloud, and when it came in sight again, the whole thing turned over, and then, like a closed-up umbrella, it shot straight down to the earth. "The descent was so rapid," says an eye-witness, "that the mean rate of the fall was not less than twenty yards a second." Within three hundred feet from the ground the basket became detached. This completed the catastrophe. Cocking was found in a field at Lee, quite insensible. On being lifted, he uttered a moan; and in ten minutes he was dead.

Meanwhile, how had the aeronauts fared in the Great Nassau? With a sidelong swirl the balloon sprang upward, the two men crouching down in the car, while Green clung to the valve line to allow the gas to escape. So rapid was their flight that the resistance of the air prevented the gas from escaping at the top, and it came rushing downwards. At once they seized the mouthpieces of the atmospheric air balloon, and to these they owed their lives, for the gas continued to pour down upon them for so long a time, and in such volume, that they would certainly

have been suffocated. As it was, they were completely blinded for some minutes. At length the Great Nassau, having attained a height of nearly twenty-four thousand feet, slowly descended, and the aeronauts safely reached the ground near Maidstone.

Many pages might be filled with the thrilling narrative of Green's adventures, but one other must suffice. On one occasion, in company with a gentleman named Rush, he was blown out to sea in the Great Nassau. Seeing some vessels from which he knew he should obtain assistance, he commenced a rapid descent in the direction of the Nore. The car struck the water about two miles north of Sheerness. The wind was blowing fresh, and, owing to the buoyancy of the balloon, and the enormous surface it presented, it was swept over the water at a speed which left the boats that had come to the rescue far behind. So great indeed was its progress, that the aeronauts were dragged through every wave, and there was every prospect of them being drowned.

Seeing that they could not be overtaken, Green by a clever manœuvre threw over his large grapnel. Fortunately, in their course lay a sunken wreck, and in its shell-covered sides the iron eventually got a hold and arrested their headlong flight. A boat soon came up and by means of ropes rescued the voyagers.

The danger was not yet over, however, for no boat could venture near the aerial monster, which struggled, and tossed, and bounded from side to side. It would have capsized in an instant any boat that came near. It was impossible to do anything till the services of an armed boat's crew were obtained from a revenue cutter. The men fired muskets loaded with ball cartridge into the restive globe, and it sank down lifeless upon the waves ; but not before the silk had been riddled with twenty-six bullet-holes.

CHAPTER VII.

OVER THE ALPS.



N the early days of the year 1846 a balloon rose slowly over the Alps, "that gigantic obstacle which even the most daring aeronauts avoid with unspeakable fear." In the car sat a solitary aeronaut, a young man named Arban. Darkness came on, bringing storm in its train, and the balloon was swept into the midst of those lofty white-mantled peaks. The moon came out from behind the clouds, spreading a silvery shimmer over peak and pinnacle and precipice of snow, and revealing to the gaze of the daring adventurer a sight such as no mortal eye had ever beheld.

All night long the storm raged, and the aeronaut, struggling against the almost overpowering influence of the intense cold, doled out his ballast grain by grain. Again and again he was in danger of being precipitated

into the immense crevices of the Mer de Glace, or crushed against the towering peaks. In the midst of this appalling situation he exulted in the knowledge that he sailed among the mountains over which human foot had never trod. Then occurred to him the curious idea of throwing a bottle overboard, which might serve as a witness to future centuries that a French aeronaut had crossed there.

When day dawned, he found himself over the plains of Piedmont, and shortly afterwards descended at a small village four miles from Turin, to which city he was carried by the enthusiastic people in a triumphal procession.

A few months later Arban made an ascent from Trieste. On this occasion the car was too heavy for the balloon to raise. The wind was blowing a hurricane; but this could not deter him from descending. With the rapidity of thought, he detached the car from the globe, and before the assembled people realised what he was doing he flew upwards into space. The wind carried him rapidly towards the Adriatic, and as he disappeared from view, he was seen standing upon the hoop, saluting the crowd with one hand and holding on to the cords of the balloon with the other.

Fearing disaster, a number of boats set out to aid

him; but they returned at nightfall without having even had a sight of the balloon.

Meanwhile Arban, after reaching a great elevation, gradually approached nearer and nearer to the waves. He had no means of rising, and was soon immersed in the stormy waters of the Adriatic. But the balloon, though too weak to support his weight in the air, had still sufficient buoyancy to drag him through the water. For hours he was trailed over the sea, now plunged in the waves, now carried over them, as the balloon rose and fell with the varying wind. Night came on. His limbs were stiff and cold. Even his herculean frame could not long withstand these rude shocks, and he felt his strength rapidly failing. Still he clung to the hoop with indomitable energy. His eyes closed, and he knew no more until the sound of oars fell on his ear, and he cried for help with all his remaining strength. His cry was answered. Some sailors returning from the Italian shore quickly rowed towards him and saved his life.

This daring and impetuous aeronaut met his death a few years later in an ascent from Barcelona. His wife was to accompany him; but as the wind blew off the land, Arban refused to expose her to so great a danger, and set off alone. His car was last seen

like a mere speck in the heavens. The Spaniards waited for several days for tidings of the traveller; but none came. His career had come to an end in the depths of the Mediterranean.

CHAPTER VIII.

STRANGE ADVENTURES.



IN the summer of the year 1847, the veteran aeronaut Henry Coxwell, accomplished what is "without doubt the most perilous descent in the annals of aerostation." In the first half of the present century there were numerous pleasure-gardens in London, from which balloon ascents were of frequent occurrence. Ever on the search for sensation, the manager of one of these gardens arranged for a balloon ascent by night with a firework display by the aeronaut.

A balloonist named Mr. Gypson undertook the difficult and dangerous task, and invited Coxwell to accompany him. The day chosen for the ascent gave every indication of suitable weather. Not a breath of wind stirred the trees. The balloon was successfully inflated, and a framework was attached to which the fireworks were fastened.

When all was in readiness for the start, the sky became overcast, the atmosphere close and oppressive, flashes of lightning were seen in the sky, and the distant rumble of thunder gave warning of an approaching storm. Then the question arose, Was the ascent to take place or not? Some were of the opinion that to go up under such conditions was highly dangerous, and would be sure to end in disaster; others thought that the weather should make no difference, and that there was no more danger in ascending then than at any other time. Coxwell favoured the latter view, and declared that if an immediate ascent was made, and everything in order and managed properly, no harm could possibly result.

The two aeronauts, accompanied by two friends, accordingly entered the car. Coxwell jumped up into the hoop to see that the neck of the balloon was clear and to give notice to Gypson when the valve required to be opened. The cable was slipped, and, amid the shouts of the spectators, the balloon rose, leaving behind it a train of fire in ever-changing colours. All went well till they had attained an altitude of some four thousand feet, when a blinding flash of lightning appeared and a splitting thunder-crash was heard apparently right over the balloon. The crowds in the garden no less than the aeronauts

were impressed with the sudden and awful report, and a profound silence reigned for a few minutes.

The balloon still ascended with great rapidity, and Coxwell, from his seat in the hoop, saw that the silk was greatly distended. On prompt and skilful conduct alone depended their safety. A few more blinding flashes followed. The globe seemed on the point of bursting. Now was the time to open the valve and allow some gas to escape. Coxwell endeavoured by signs to warn Gypson of the danger, but the aeronaut paid no attention. At last Coxwell shouted out, "If the valve is not opened the balloon will burst." As he spoke, the car dropped several feet. In terror the aeronauts looked up, fearing that the network had given way, but it was so dark that they could see nothing except the gaslit metropolis rushing up to meet them at fearful speed. Their headlong fall was suddenly stayed, and a vivid flash of lightning enabled them to see what had happened. The view was by no means reassuring. The silk was torn right across for about sixteen feet. Death seemed inevitable.

All this time Coxwell had remained in the hoop, and it was indeed fortunate that he did so. As they fell, he noticed that the line which connected the neck of the balloon was strained to its utmost tension, and he thought that if he cut it, the lower half of the



A TERRIBLE MOMENT.

balloon would expand and form a kind of parachute which would moderate the rapidity of their descent. Contrary to the wishes of his companions, he did so, and at once their downward flight was checked; but all danger was not yet over. Indeed, it seemed as if they had only exchanged one danger for another still more terrible, for "the sparks from the paper cases shot up among the gas through the tear in the silk, and once more the thunder roared, and the lightning flashed, so that a more frightful descent to the earth could not possibly be imagined."

As they neared the ground, ballast-bags were collected and the grapnel was got ready for use, though there seemed but little chance of either being effective among the thickly clustering houses and hard pavements. Fortunately the balloon fell in a newly-formed street in the west end of London, while the network caught in some scaffold poles, so that the force of their fall was greatly broken, and they all reached the ground uninjured.

Another ascent which Coxwell made on the 16th of October 1853 is also well worth recording, on account of the amusing as well as the dangerous aspect of the adventure, and as showing that after the aeronaut had safely passed the perils of the air, he had often others, no less real, to encounter on land.

On the day already mentioned, Coxwell had arranged an ascent from one of the pleasure-gardens in the east end of London. But the morning broke wet and windy, and it was feared that the exhibition would have to be postponed. As the day wore on, the sun broke through the clouds, and the wind moderated. All preparations were made, and everyone stood at his place waiting for the signal from the aeronaut to inflate the balloon.

It was late in the afternoon before the word was given, and at six o'clock, the Sylph, as the balloon was called, was not quite half full. This presented a serious difficulty, for the wind had risen again, and was blowing in fitful gusts, which the balloon in its present state was ill calculated to withstand. Owing also to the lateness of the hour, only another half-hour could be spent in inflating. Fortunately this was sufficient to give the Sylph the necessary ascending power.

The balloon rose rapidly; but a sudden gust of wind, more violent than the rest, caught the machine, and drove it along in a downward direction. Quickly Coxwell threw out two bags of sand; but this was not sufficient to enable the Sylph to rise, and to his horror, he saw himself carried directly towards a tall chimney. A collision was certain, and he had only

time to seize hold of the edge of the car when the crash took place. Down hurtled the bricks and mortar, while the balloon, undamaged, soared aloft on the freshening breeze.

In a short time the barometer indicated an immense elevation. As he did not wish to go any higher, the aeronaut pulled the valve line; but no amount of tugging would open the shutters. On looking to see what was the cause of the hitch, he found that, in the hurry of filling the balloon, a fold had been allowed to form in the silk. This effectually prevented the valve from working, so there was nothing for it but to allow the balloon to take its own course, and wait till the gas had exhausted itself, sufficient to permit of a descent.

After attaining an elevation of two miles and a half, the Sylph began to travel towards the earth. "On the descent," says Coxwell, "I noticed a splendid meteor, which was below the level of the car, and apparently about six hundred feet distant. It was blue and yellow, moving rapidly in a north-easterly direction, and became extinguished without noise or sparks—its size was half that of the moon. I could not but feel that if such another visitor were to cross my path, the end of the Sylph and its master would be at hand."

Shortly after eight o'clock, the balloon descended in a field near Basingstoke. It was by this time quite dark, and as far as the eye could reach, there was no sign of a dwelling. Not knowing where he was, Coxwell shouted in the hope of attracting some passer-by; but no answer was returned, and he began to fear that he had landed in some very outlandish place. He continued, however, to shout till he was hoarse, but with no better result, so he reluctantly made up his mind to spend the night in the car.

After a supper of sandwiches, he lay down and tried to sleep; but the thought that perhaps he might be able to obtain assistance at no great distance kept him awake, and he determined to explore the neighbourhood. Crossing the field, he came to a gate which led into a lane. Cautiously the aeronaut groped his way by the side of the hedge, and in a quarter of an hour he saw the welcome glimmer of a light in the window of a farmhouse.

"Now my troubles are over," thought Coxwell as he clambered over the stile; but they were only just beginning. Hardly had he reached the top bar when a great fierce Newfoundland dog rushed at him. Without pausing to see whether the animal was chained or not, he took to flight, nor did he pause or

look back till he had gained the safety of the field in which his balloon lay.

Such an experience was not to be repeated, so he lay down again in the car. Just as he was dozing off, he heard voices coming in his direction, and thinking that some villagers who might have seen the balloon descend were coming to his assistance, he got up and shouted, "Here I am, and the balloon all safe." At once the talking ceased, and a gentle hush occurred, followed by the sound of hurried footsteps in full retreat. Coxwell shouted that they had nothing to fear; but his voice only accelerated their flight.

He then came to the conclusion that there must be houses at no great distance, and resolved to make one more attempt to procure assistance. Arming himself with a stout piece of iron, he sallied forth, and after walking about two miles, he came to a number of cottages. He strolled up the chief street of the village, and in turning a corner suddenly, he found himself face to face with a workman on his way home. Coxwell lost no time in making known his condition; but his story excited suspicion instead of sympathy, and the only help he could get out of the man was a recommendation to make known his wants at the village inn.

He hurried off in the direction indicated, and on

the way met a policeman. Going up to the officer, he asked him where he was, and explained the circumstances. Again he was met with distrust, and in reply to his question, "What county am I in?" the constable said, "You don't know what county you're in, don't you? Well, if you don't clear out of this, you'll know that you're in the county gaol soon enough."

Finding that it was only wasting words to try and get any information, Coxwell set off for the inn; but when he arrived the whole place was in darkness, and no answer was given to his repeated knocks. In disgust he turned away and went back to his balloon in the field, where he spent the night.

Early on the following morning some farm labourers on their way to work across the field found the balloon, and helped Coxwell to exhaust the gas. He breakfasted with the farmer, and afterwards went down to the inn, where the mysterious treatment of the previous night was explained. A few days before a gang of thieves had robbed many of the shops and houses, and every stranger was looked upon with distrust. The landlord said he had heard his knocking; but he had been warned by the policeman that there was a dangerous fellow about, so he did not open the door. In expressing regret for the unfriendly reception the aeronaut had had, the landlord said at

parting, "Another thing, you must not forget that you have come among the Hampshire hogs, and that a grunt or two is all in character."

In an ascent from the Crystal Palace on the 18th of April 1863, Coxwell had a very narrow escape. On this occasion he was accompanied by Glaisher the scientist. The start did not augur well for a pleasant voyage, for suddenly the rope which held the balloon to the ground broke, and the aeronauts were started on their trip sooner than they intended. The balloon rose rapidly, and in less than a quarter of an hour reached the height of ten thousand feet. Here they encountered a strong southward current of air which bore the balloon along at a rapid pace. They were shut in by the clouds, and had no idea of their whereabouts; but as the barometer now indicated an elevation of twenty-four thousand feet, there was no cause for any uneasiness.

When the aeronauts had been in the air about an hour and a half, they thought it advisable to descend in order to find out their position. A rapid drop brought them out of the clouds, and within ten thousand feet of the earth. Suddenly Coxwell, who was looking over the side of the car, cried out, "What's that?" His companion joined him, and they were not long in making out their position. There was not

a moment to spare, for below them lay the bold promontory of Beachy Head, and they were almost directly above the sea.

"Quick!" shouted Coxwell; "we must save the land at all risks. Leave the instruments—everything."

Both men seized the valve line and hung on for dear life; and with such energy that they not only opened the valve, but also tore a large rent in the surrounding silk. The balloon descended almost in a straight line, and the car was dashed to the earth with a shock that shattered the instruments; but the aeronauts' lives were saved. A few seconds more and the balloon would have struck the sea.

Some idea of the speed of the fall may be formed from the fact that ten thousand feet were passed in four minutes.

Two years later Coxwell had a similar experience in an ascent from Belfast. On this occasion he took up with him a number of passengers. Seeing that the balloon was approaching the sea, they became alarmed, and one of their number seized the valve line with such violence that it broke. The danger was now real, so Coxwell gave the order for all to leave the car together, the moment its downward tendency brought it within a safe anchoring distance of the ground. His commands were obeyed, as he thought, by every-

one. Two persons were, however, left behind, and the lightened balloon bounded upward for some distance. Fortunately it came within reach again, and they were got out.

The balloon again got free, and was afterwards picked up on the shore of Lurgan Bay anchored within a few paces of the sea.

CHAPTER IX.

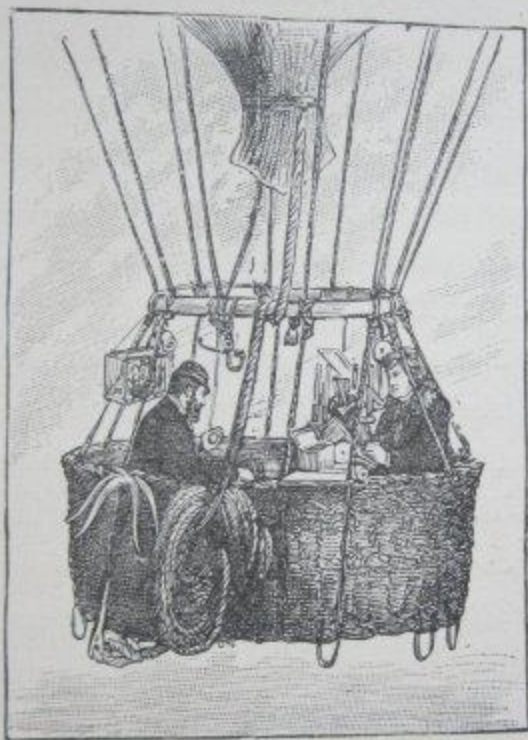
SEVEN MILES HIGH.



THE highest ascent on record was accomplished on the 5th of September 1862 by Mr. Coxwell, the hero of the previous chapter, accompanied by the well-known scientist, Mr. T. Glaisher. This was the most important of the eight scientific ascents made on behalf of the British Association at this time. The fittings of the car were arranged with the utmost care. Glaisher had a specially prepared table fixed in the basket, on and attached to which were about thirty different instruments, so placed that each could be easily consulted. Indeed, nothing was left undone that was likely to ensure the success of the voyage and the accuracy of the observations.

Accordingly, on the day named, the balloon made a rapid ascent from Wolverhampton, shortly after one o'clock. All went well, and in about half an hour

they had reached a height of four miles. Still the balloon ascended. All this time Glaisher was fully occupied with his observations; but suddenly he became conscious of a dimness of sight, and soon



MESSES. GLAISHER AND COXWELL IN THEIR BALLOON.

could not read any of the fine divisions of his instruments. They were now over five miles high. Alarming as was this experience, it was as nothing to what followed.

Wishing to enter an observation in his notebook,

Glaisher found that his right arm was powerless—a moment before it had been possessed of full vigour. He tried his left arm—it also was useless. He struggled and shook his body; but he could not move his arms. He looked at the barometer, and whilst doing so, his head fell back, resting on the edge of the car. In this position, he says, "I dimly saw Mr. Coxwell, and tried to speak; but could not. In an instant, intense darkness overcame me; but I was still conscious, with as active a brain as at the present moment while writing this." Then he became insensible.

At the moment Glaisher was seized with partial blindness, the valve line became entangled, and Coxwell had to leave the car and go up into the ring to readjust it. The task was not easy. The cold was intense, and hoar-frost had gathered all round the neck of the balloon. When at length matters were put right, and the aeronaut prepared to return to the car, he found his hands were frozen. He had therefore to place his arms in the ring and drop down.

Glaisher was by this time lying insensible in the bottom of the car. The looseness of his attitude and the calm expression on his features alarmed Coxwell, and he attempted to move forward to see if his companion was still alive; but he too was powerless. Unconsciousness was rapidly overtaking him. He

knew that unless a descent was made, and that speedily, they could not reach land alive. His hands were powerless; but with the energy of determination he seized the valve line in his teeth, and dipped his head till the balloon began to descend.

He next turned his attention to his companion. The first words of which Glaisher became conscious were "temperature" and "observation"; but he could neither see, speak, nor move. Gradually his faculties returned, and he sat up and looked round like a man who had just awakened from sleep. "I have been insensible," he said.

"You have," replied Coxwell; "and I too very nearly."

He then resumed his former position, and with notebook and pencil in hand, continued his observations as if nothing had happened. One cannot but admire his heroic sense of duty. Even in this critical moment he gave no thought to self, his whole mind being devoted to the obtaining of observations that would be of value to science.

Slowly the balloon descended, and at last came to the earth seven miles from Ludlow. No conveyance could be obtained, and a long compulsory walk to that town finished the day. Neither of the aeronauts experienced any bad effects from their perilous adven-

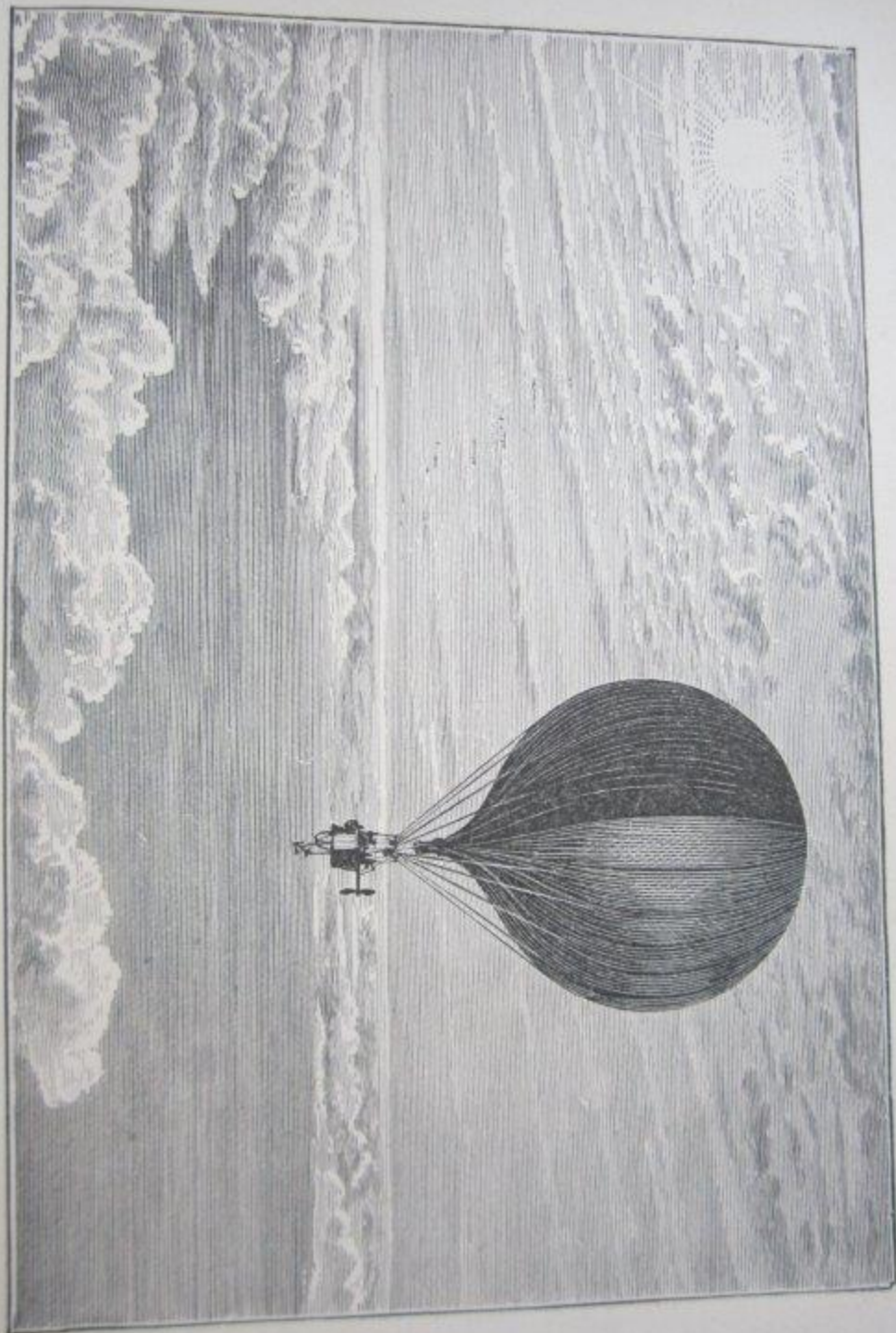
ture. From careful observation and calculation, Glaisher estimated that they reached the extraordinary height of thirty-seven thousand feet, or upwards of seven miles, and that too in little more than an hour.

The escape of Glaisher and Coxwell from death at that tremendous elevation, marvellous as it was considered at the time, is rendered more remarkable by the fate which befell three Frenchmen who attempted a similar ascent twelve years later. This is one of the saddest episodes in the history of ballooning.

The French Society of Aerial Navigation organised an ascent for the purpose of testing the restorative powers of oxygen when breathed instead of ordinary air in a rarefied atmosphere. Accordingly a new and large balloon, named the Zenith, was built and inflated at La Vilette gasworks in Paris. On a bright spring day in April 1874 the ascent was made. In the car were three gentlemen, M. Sivel, captain of the balloon, and two scientists, Croci Spinelli and Gaston Tissandier. The latter had joined the expedition for the purpose of analysing the dust of the air, and had brought with him a large reservoir of petroleum oil, which was fastened to the car by cords, so that it might easily be cut away if its great weight should imperil the safety of the balloon.

All went well till they had reached an elevation of

THE "ZENITH" SHOT UPWARD.



about twenty-three thousand feet, when they experienced some difficulty in breathing. This was, however, soon remedied by inhaling the oxygen they had brought with them. They felt greatly invigorated, and after a brief discussion, it was decided to attempt an even greater altitude. A quantity of ballast was thrown over, and the Zenith shot upward.

Soon afterwards Tissandier fainted and remained unconscious for upwards of an hour, till he was awakened by one of his companions, who warned him that the balloon was descending. In a mechanical sort of way, like one in a dream, Tissandier threw over some ballast. Hardly had he done so than he sank back exhausted and fell asleep.

A momentary panic seems at this point to have prostrated the wits of his companions, who madly cut away the reservoir, which weighed about eighty pounds. Thus lightened, the balloon rushed upwards at a fearful speed, and as it travelled, unconsciousness overcame those in the car.

An hour later, Tissandier again roused himself. The Zenith was descending rapidly, and there was no more ballast left to break the force of the terrific plunge. Turning to his companions for help, a horrible sight met his gaze. They were lying in the bottom of the car, black in the face and with blood

oozing from their mouths. They had been suffocated, and were both dead.

The rapidity with which the balloon dropped through space gave no time for thought, and the fate which had befallen his friends numbed his action. Soon he would be like them—dead—dashed to pieces. It was a terrible position; but with the resource which often comes to men in moments of the direst peril, Tissandier saw a way of escape, and prepared to avail himself of it. With the utmost coolness he cut away the grapnel rope just as the car was about to strike the ground. The balloon rose for a moment, and was swept along by the force of the wind. He tore open the silk to check its mad flight. It was at last caught in a hedge at Ciron, a commune of Indre, a hundred and ninety miles from Paris. The survivor was found by some people in the neighbourhood, who nursed him with every care till he was sufficiently recovered to return home.

There are no records of the height that was reached on this occasion; but it must have been very great.

CHAPTER X.

A TERRIBLE EXPERIENCE.



THE Géant was the name appropriately given to an immense balloon which was constructed in Paris in the year 1863. It was made entirely of silk, and was upwards of a hundred and twenty feet in height. Underneath the globe was a smaller balloon called the compensator, which was intended to prevent loss of gas during the voyage. The car was perhaps the most wonderful part of this gigantic machine. In shape it was not unlike a small cottage. It had two storeys, thirteen feet long by eight feet high, with berths like a ship, and plentifully stocked with provisions.

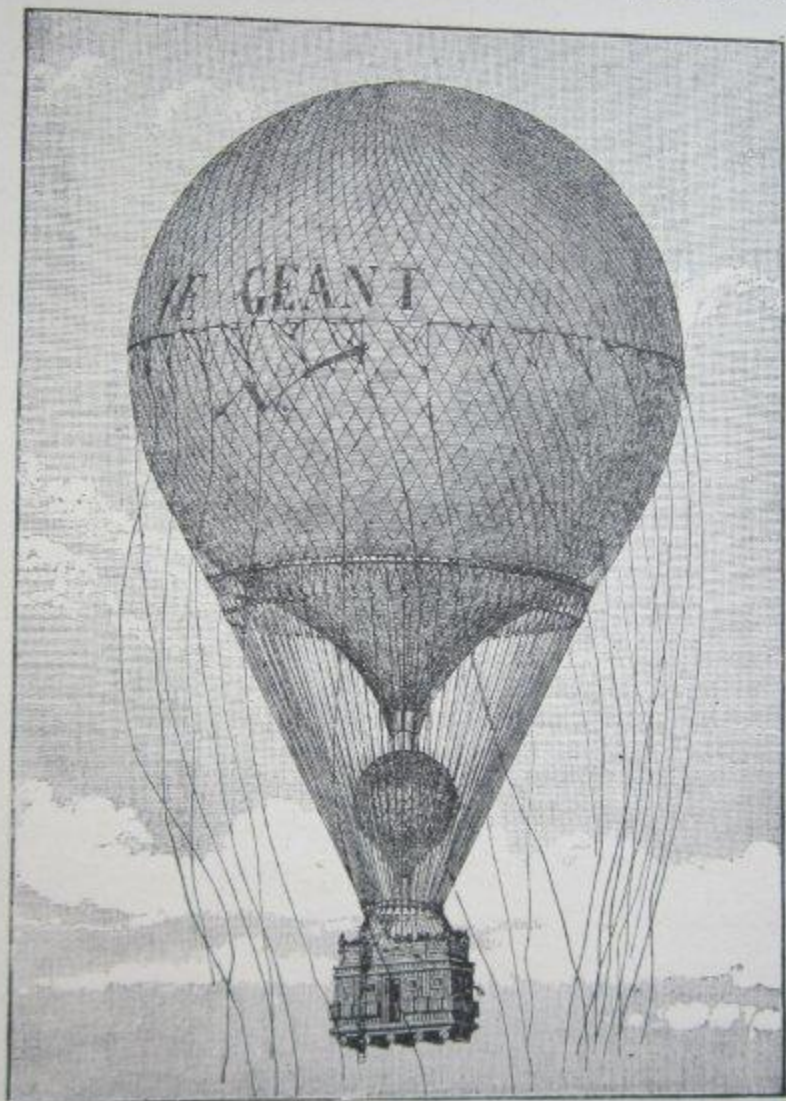
The first ascent took place in Paris on the 4th of October 1863, under the management of an aeronaut named M. Nadar. The excursions of the Géant made a great commotion. They were indeed almost as

sensational as the original Montgolfier and Charles ascents, and an immense crowd assembled to witness the departure of the balloon with its crew of thirteen persons, each of whom carried a passport in nearly all the languages of Europe.

The ascent was slow and gradual at first, as if the giant machine was feeling its way to the clouds. Then it rapidly descended, and it was not till several bags of ballast had been thrown out that the Géant took its flight to the upper air amid the cheers of the spectators. Paris was passed over at the height of about six hundred feet; but the voyage for which the most elaborate preparations had been made, and which was to bring about a new order of things in the science of ballooning, ended at Meaux, distant about thirty miles from Paris.

About a fortnight later a second attempt was made to prove the Géant worthy of the expectations to which its construction had given rise. On this occasion the balloon was carried in a north-easterly direction, and was last seen by the inhabitants of Paris making for the Belgian frontier. Soon afterwards the sun set in purple majesty, and the aeronauts from the roof of their osier house looked down in admiration through the clear night air on the wonderful panorama that was unfolded to their view

Over cities, fires, forges, tall chimneys, and coal



THE "GÉANT."

mines they were carried in safety. Occasionally there came loud shouting from below as the balloon became

clearly visible. Once, in passing over a small town, someone in the excitement of the moment fired a gun, and for a while the aeronauts were spellbound with terror, not knowing if the gun was loaded, or if the ball might pierce the globe; but nothing of the kind happened. Brilliant, gaslit Brussels was quickly left behind, and then the balloon entered a region of silence and darkness. So on through the night the voyage was continued. All was silent in and around the car, save when Nadar woke the echoes of the slumbering earth with "titanic shouts" from a speaking-trumpet worthy of his balloon.

At dawn all was going well, and the aeronauts had a magnificent view of the sunrise. "Suddenly, as with a burst of joy, a flash of light darts through the azure vault. It is the signal, re-echoed from the most distant horizons, of the ushering in of day in all its splendours." But the voyage, so fortunately begun and so successful up to this point, was nearing a tragic termination.

Away on the edge of the horizon, a white streak, as of fog, was seen, which Nadar at once declared was the sea.

A sudden and unaccountable panic took possession of the voyagers, in spite of the reassuring words of their captain that there was no danger. Someone

pulled open the valve. What followed was not a descent; but a fall. Down went the balloon like a stone. There was no time to speak, and no one had sufficient presence of mind to act in this awful, sudden emergency. The ground was within thirty yards of them, and appeared to be rushing to meet them with lightning rapidity. There were still twenty sacks of ballast in the car, sufficient, had they been thrown overboard, to arrest this headlong plunge to earth, and give the aeronauts time to choose a suitable landing-place; but they remained undisturbed, while each and all sought the only possible safety in clinging to the ropes of the balloon.

Fortunately, the wind blew with such terrific violence near the ground that their fall was broken, and instead of crashing to the earth, the balloon was carried along a short distance. "Hold on! hold on!" was the cry, as with a thundering shock the car collided with a mound. Many were forced to let go their hold, and were thrown on their heads. The balloon rebounded with an immense spring. The platform of the car was now a scene of confusion and fear, as everyone rushed to his place again and held on with the determined grip of despair.

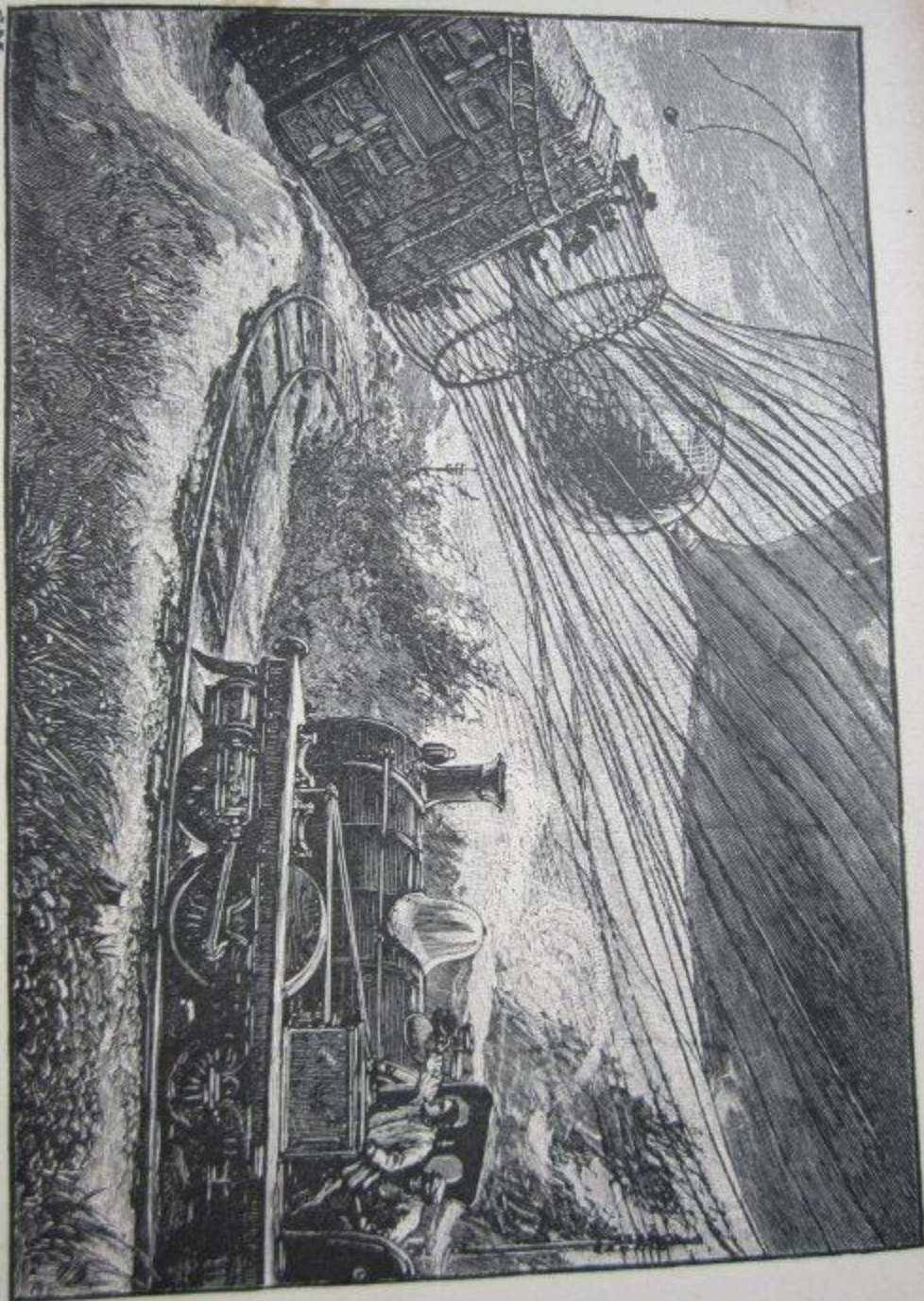
Houses and fields flew past with a rapidity which almost rendered them unnoticeable. Another shock

caused the Géant to rock and tremble. The rope of the anchor, which had been thrown out in the vain hope of arresting their progress, was snapped by the force of the collision as if it had been made of pack-thread. Onward they flew with redoubled speed before the fury of an ever-increasing gale.

The shocks were now so frequent that it was impossible to count them, and at each shock the car rebounded like an indiarubber ball, sometimes to a height of fifty feet. The terror-stricken crew had crowded by this time to one side of the car, and as this happened to be the side which struck the ground, their sufferings and dangers were increased tenfold.

"By the least negligence or slip, or by the loss of presence of mind for one moment, we should have been thrown out and dashed to atoms. Every collision tries our muscles and strains our wrists or our shoulders, and every rebound dashes us one against the other, constituting each individual a tormentor and victim at the same time. Our flight is so rapid that we can only distinguish an occasional glimpse of anything. What a dizzy whirl! what a succession of breathless shocks! Far in the distance, we distinguish an isolated tree. We approach it like lightning, and we break it as if it were a straw.

THE WRECK OF THE "GÉANT."



Two terrified horses, with manes and tails erect, endeavour to fly from us; but we consume distances, and leave them behind immediately."

But a still greater danger was at hand. The path of their flight was next crossed by a railway embankment, along which a train was slowly travelling. Benumbed with fear, the aeronauts clung to their posts awaiting the catastrophe. They knew well enough that one of two things must happen—either they would be crushed by the locomotive, or the balloon would in its hurricane speed overturn the train. A few yards more and all will be decided. So they thought; but they had reckoned without the engine-driver. He, too, comprehended the danger, and, after quickly bringing the train to a standstill, backed just in time to allow the flying monster to sweep past.

"Look out for the wires," cried the man, and those in the car instantly lowered their heads in obedience to the well-timed warning. No one was hurt, but several of the ropes were cut. Still the *Géant* kept on her headlong course, trailing after her, like the tail of a comet, the telegraph wires and the poles by which they had lately been supported.

At length the car became entangled in a wood near Rethem in Hanover, the adventurers were thrown

out, and several of them had their limbs broken. The blind King of Hanover treated the unfortunate aeronauts with great hospitality, and entertained them until they had sufficiently recovered to return to Paris.

CHAPTER XI.

TWIXT SEA AND SKY



O Jules Durnof belongs the proud distinction of having been the first man to show the way out of Paris in a balloon, when the French capital was besieged by the Germans in 1870. As a French writer says: "An aeronautical Curtius was wanted, who would throw himself head-foremost into the gulf of the clouds, and Durnof did not hesitate to brave the fire of the Prussians with an old balloon leaking at every seam."

He had been one of the crew of the *Géant*, and in that terrible trip he had learned the lesson invaluable to aeronauts, never to despair, a lesson which in subsequent years stood him in good stead on more than one perilous occasion. With the means now at his disposal, he knew that his only hope of safety lay in the force with which he started, so he launched

his balloon, "like a projectile which issues from a monster mortar." He carried with him a number of despatches for the authorities at Tours, then the seat of government.

His ascent did not escape the eyes of the watchful Prussians, who greeted his appearance over their lines with a rolling fire of musketry, and followed the course of the balloon in hot pursuit, expecting that it would be brought down. It was no light task to keep the leaky globe afloat, and Durnof's utmost skill and attention were called into action; but in spite of this he enlivened the terrible situation with a display truly Parisian. Having sacrificed a large quantity of ballast, and so risen beyond the range of the enemy's fire, he threw *cartes de visite* down on the heads of the Prussians, who, infuriated at his escape no less than his contemptuous treatment of them, directed a salvo of artillery against the vanishing balloon. Fortunately the daring aeronaut was out of range, and he eventually landed in safety nineteen miles away.

Towards the end of July 1873, Durnof made one of the most sensational ascents ever accomplished. He had arranged to start from Calais, with the intention of making the passage of the Channel from France to England. His wife was to accompany him. When everything was in readiness, the weather was

unfavourable, and the authorities refused to sanction his departure. The Mayor, however, had not the courage of his convictions, and delayed making the decision of the council known to the people. They naturally thought that the blame rested with Durnof, and in their disappointment several persons loudly accused the aeronaut of being afraid. The man who had opened the aërial route from Paris needed not to pay any heed to these grumblings; but at once his courage was on fire, and, obtaining possession of the balloon, he set out before the authorities had time to prevent him, taking his wife with him. Night came, terribly dark and stormy, as the adventurous voyagers vanished over the sea.

When the story of the ascent became known throughout Europe, it was received with mingled feelings of horror and admiration,—horror that so brave a man should have been driven to so desperate a deed; admiration for the heroic rashness which prompted him to risk two lives that the charge of fear and failure might never appear against his name. No less heroic is the trustful simplicity of his wife, who, in face of the peril, calmly accompanied her husband, confident of his coolness and energy.

Three days passed, during which the utmost anxiety prevailed. All hoped, but none expected

ever to hear of the adventurous couple again. At length the miraculous news was flashed along the wire that Durnof and his wife were safe.

Their escape was indeed marvellous. When they ascended, they were carried by the wind out across the North Sea. Towards nightfall Durnof attempted to attract the attention of some passing vessels, but without success. The violence of the wind was by this time greatly increased, and the position of the aeronauts became more and more hazardous. The balloon had a strong downward tendency, and there seemed to them no escape from a watery grave.

At length the *Great Charter*, a fishing smack from Grimsby, hove in sight. Durnof signalled frantically for help, and the Englishmen at once shaped the course of their boat towards the balloon. What happened after this cannot be better described than in the aeronaut's own words.

"The sea was very rough indeed. I opened the valve and descended until the ropes were trailing in the water, and in an instant we were past the vessel. The crew of the smack, however, launched their boat, and two men rowed it towards us. It was then six o'clock, and, seeing the goodwill of the fishermen to come to help us, I resolved to stop the speed of the balloon, by springing the valve until the car filled

with water, and thus give more resistance to the speed of the balloon. When I turned round, however, I could not see the vessel. From time to time tremendous waves broke over the balloon, covering us with water. We were drenched to the skin, and I was in constant fear lest the balloon should burst, in which case we should assuredly have been lost.

"At seven o'clock we again sighted the smack on the horizon, and saw that she was pursuing us, and by degrees we noticed that she came closer to us. The cold was most intense, and our limbs were gradually becoming powerless. Our strength failed fast, and the hope of being overtaken by the smack alone gave our arms nerve to hold on. My wife's limbs were benumbed, and at each succeeding jerk of the balloon she became weaker and weaker, and I had to support her entire weight in my arms. The smack continued to approach us, and was now only about six hundred yards off. I pointed this out to my wife, and it renewed her courage. I raised myself on the ropes and saluted our rescuers. They saw us and launched their boat, manned by William Oxley and James Bascombe, the master and mate of the smack. They came nearer to the car and took hold of the rope."

Then followed a scene of which every Briton may well feel proud, rich as our country is in memories of

heroic deeds of life-saving. The gallant Grimsby fishers seized hold of a rope, thus fixing themselves to the balloon, which dragged them through the water at a furious pace.

"Their boat was nearly sinking," says Durnof, "on account of the strong jerks of the balloon; but they did not lose courage, and, taking hold of my wife's hand, who was like a corpse, dragged her as best they could into their boat. I was dashed against the side, and I let myself fall into it, where I lay on the floor, as helpless as my wife. The men let go the ropes of the car, and the balloon rushed off with a mighty speed towards Norway."

The exhausted aeronaut and his unconscious wife were taken on board the smack and conveyed to Grimsby in safety. They were received in London with the greatest enthusiasm, and a benefit fête was organised at the Crystal Palace, in which they took part, so little had their perilous adventure affected their courage. When they returned to France, the people of Calais collected a handsome sum of money, which Durnof spent in the construction of a large balloon, to which he gave the name of *Ville de Calais* in honour of the town.

In this balloon Durnof ascended at Cherbourg on the 21st of August 1876. He had profited greatly

by his former experience, and to prevent accident he ordered four steamers to cruise about in the offing. He also attached large cork floats to the car, and a huge cone hung suspended from a long rope, so that, should he come down in the water, the drifting would not be attended by the same dangers as in the North Sea.

The wind was in a north-easterly direction and carried the balloon rapidly towards the Strait. Hoping to reach a current which would bear him to land again, Durnof threw out quantities of ballast, and rose to an elevation of fourteen thousand feet. The breeze was still seaward, so he determined to make a descent in the water. His appliances worked admirably. When the *Ville de Calais* approached the waves, Durnof threw out the cone, which instantly diminished the speed, so that the crew of the steamer, which came up in a few minutes, had no difficulty in securing the balloon and towing it into port. Strange to say, a repetition of this experiment on the following day ended in the total wreck of the *Ville de Calais*.

A few years ago a French aeronaut named Gaston Besançon made an ascent from Havre, accompanied by two friends, in a balloon called the *Jupiter*. It was struck almost at once by a gale which carried it straight over the broadest part of the Channel. They disappeared from view, and for a week nothing was

heard of them and they were given up for lost. They were, however, by what seems a special providence, saved, and the story of their adventure rivals the perils endured by Durnof and his wife.

When Besançon saw what course the balloon was taking, he opened the valve. When it neared the surface, he threw out a weight which he hoped would serve as a floating anchor, and by the aid of which, by paying out or taking in rope, the Jupiter might be kept at a safe distance from the waves. This plan was excellent, and had often been successful, but on this occasion the gale was so strong, and the plunging of the air-ship so violent, that the stout rope snapped like thread and the anchor was lost.

Like a restive steed the balloon plunged hither and thither, nearly upsetting the car at each bound, while the aeronauts clung in silent terror to the edge, in momentary expectation of being thrown out. They gave up all thought of managing their craft, and it quickly sank to the water. Everything in the car was at once cast overboard, but without success. Then they divested themselves of the greater part of their clothing, and the balloon slowly rose. But the respite was brief, and in the meantime their sufferings from cold were extreme.

The aeronauts heard the voices of fishermen in their boats, and shouted to attract their attention, but in vain. They were hurried out of hearing, and an awful silence, broken only by the noise of the waves, settled upon them. Throughout the long dreary night they were buffeted about. They were almost dead with cold, exposure, and fatigue. They abandoned all hope and gave themselves up for lost.

Day dawned. Suddenly they saw a vessel before them. They shouted, and made what signals they could. Eagerly they waited, and in a few minutes they saw with unspeakable joy a boat put off from the steamer. No ordinary skill and bravery were required to pilot the boat in such a sea, and the utmost caution was required in getting alongside the tossing balloon. At the risk of their lives the sailors seized a rope and dragged the Frenchmen out of the very jaws of death. The aeronauts were taken on board the steamer, where they received every possible kindness and attention. When they had sufficiently recovered, they learned that the ship was the *Germania*, manned by German sailors—they had been rescued by their national enemies.

The balloon afterwards descended in England, having made a voyage to the clouds, where the car had become weighted with snow and ice.

CHAPTER XII.

DROPS FROM CLOUDLAND.



TANLEY SPENCER, the head of the well-known firm of balloon-makers, is an aeronaut of great daring and experience. He has made altogether two thousand balloon ascents, and nearly a thousand parachute descents. Nor have his adventures been confined to England. He has braved the dangers of the air in the Cape, America, France, and other Continental countries.

He carries on his wrist an ugly scar, which he received many years ago in Havana under rather curious circumstances. He was to make a parachute descent from a hot-air balloon. Such a machine has neither car, ballast, nor netting, and had therefore to be held down by a small army of men till everything was ready for the start. The place from which the ascent had to be made was badly chosen, being

shut in by houses and surrounded with telegraph wires.

Hardly had Spencer started than a boisterous wind caught the balloon, and bore it down on one of the poles used in hoisting, which ripped a great hole in the side. Thinking, however, that he had still time to reach the necessary elevation before the hot air was expended, he continued on his way. About fifty feet from the ground he was swept against the telegraph wires, one of which caught his wrist, inflicting the scar of which we have spoken, while others broke across his chest. He held on like grim death, and after a few more tugs he got free and ascended with a long piece of wire hanging to the balloon.

Much precious time had meanwhile been lost, and the hot air had escaped in such quantities that it was impossible for him to reach the height necessary for a safe descent by parachute. The wound in his wrist, too, bled freely, and he began to feel faint. He clung to the balloon, and after a time it took a downward course, landing him eventually in the back-yard of a house among a brood of chickens. When he was found, he was so overcome with weakness that he could hardly speak. The authorities were of course summoned, and Spencer was carried to the military hospital, where his wrist was sewn up.

When he came out of the hospital, a great crowd of Spaniards was waiting to receive him, in total ignorance that an accident had happened, or that a parachute descent had taken place. So great was their admiration for what they regarded as a feat of unparalleled daring, that they took the horses out of his carriage and dragged him through the streets in triumph, till the police came to the rescue of the bewildered aeronaut.

There is nothing of which an aeronaut has a greater dread than to be carried out to sea, but Spencer has encountered this adventure on several occasions. On one occasion he ascended from Prince Edward Island on a beautiful calm day. All went well till he reached an elevation of three thousand feet, when the wind shifted, and carried him out over the water. Fortunately he had taken the precaution of putting on a lifebelt, so that when he left the car with his parachute he felt little apprehension.

Down he went into the water like a stone. When he came to the surface, his first thought was for his parachute. It was floating near, like a huge jelly-fish. He at once seized it, determined to save it if possible. Those on shore lost no time in sending a boat to his aid; but nearly an hour elapsed before it reached him. During this time he was frequently

under water, for as the parachute got wet, it dragged him down, and it was only by the greatest exertion that he was able to keep himself and his "jelly-fish" afloat.

A few years ago, Spencer had another "salt water experience." This time he ascended from Sunderland. The day was bright and calm, in fact, an ideal day for an aerial trip. The balloon rose quickly to an elevation of five thousand feet, the utmost height from which a safe descent can be made by parachute. Just as he was preparing to cast loose, a strong upper current swept the balloon seawards. Quickly he threw out every ounce of ballast in the hope of changing his direction, and in a few minutes the balloon mounted fifteen hundred feet.

Looking over the edge of the car, Spencer saw the sea below him shining in the strong sunlight like a silver mirror. From the distance it was impossible for him to choose his landing-place or to know whether or not he would alight in the water.

"The chances looked decidedly in favour of my taking an involuntary bath," he said afterwards, "but I decided to let go. As it happened, I landed on the beach within a few yards of the surf, and escaped with nothing more serious than a spray shower-bath."

On another occasion at Halifax, Nova Scotia, he

was less fortunate. On falling into the sea, his limbs became entangled in the cords of the parachute, so that he was practically powerless to keep afloat. Just when he was giving up all hope, he was seen and rescued by a passing fishing-smack.

At Bristol in the autumn of 1894, Spencer had his most exciting adventure, and one from which it is a marvel he escaped with his life. The day was altogether unsuitable for the aeronaut. Heavy rain fell, and the wind was boisterous, with now and then a heavy squall. Being unwilling to disappoint those who had come to see him, he determined to risk an ascent. When only a few hundred feet from the ground, the balloon was struck by a heavy squall, and before he really knew what had happened, he found himself falling rapidly.

He was too near the ground to make use of the parachute, so there was no way of escape. For one moment he saw a sea of white upturned faces apparently rushing towards him, the next, he went crashing through the roof of a house, and through the ceiling of a room in which two old ladies were sitting. Here his descent stopped. He was picked up unconscious and carried to a hospital. Incredible as it may seem, no bones were broken, and beyond a few cuts and bruises he was none the worse.

Three days later he ascended under more favourable conditions, and accomplished the descent in safety.

An exciting scene took place at a Foresters' fête near Cardiff early in 1890. Among the attractions was a parachute descent by a lady aeronaut named Ada Macdonald. A hot-air balloon was used for the ascent, and the apparatus used was complicated and clumsy. She had a thick strap round her waist, and to it were attached the thin white cords of the parachute, which was in its turn attached to the bottom of the balloon.

When all was ready, the order to let go was given, and the balloon shot upwards; but the men who were holding the small wicker chair in which the girl sat, let go too soon. The consequence was that the cordage between the chair and the parachute straightened with a violent jerk, and to the horror of the spectators the aeronaut was thrown out of the chair, and hung suspended by the belt.

The balloon ascended with great velocity, and all the while the girl was seen helplessly struggling in the air, entangled among the cords of the parachute. At a height of about three thousand feet, the parachute passed under her, and almost at the same moment she broke loose from the balloon. For a few seconds her descent was headlong, and then, as if by a miracle, the

parachute opened, and stayed her fall. Coming down gracefully, she landed in a field, and, beyond the nervous shock, none the worse for her startling adventure.

An aeronaut named Higgins, who came forward as the rival of Baldwin, the daring American parachutist, had a singular experience on one of his trips from Croydon, on the 12th of April 1890. The balloon had no car, and the aeronaut sat on a small trapeze suspended from the netting. On reaching a height of four thousand feet, the balloon got into a strong current, and twisted right round. The wind then caught the parachute, causing the wooden ring to grip him tightly under the arms. While he was trying to put matters right again, the test cord broke, and the parachute hung down below him fully inflated. The pressure on his limbs was so great that he had the utmost difficulty in retaining his seat, and a descent was impossible. He therefore opened his penknife with his teeth, and cut the cords of the parachute.

This caused the balloon to shoot six thousand feet higher, and on reaching that altitude he was encountered by another current, which brought with it sleet and snow. He never for a moment lost his self-possession, and during his strange voyage was able to take note of the merest detail of his surroundings.

The storm lasted for about ten minutes, and during that time Higgins was in total darkness, and the only sound which reached his ears was the rumbling of trains. When he passed through this snow-cloud, the sun was shining brightly. Below him, as far as the eye could reach, he saw what appeared to be snow-clad mountains. So clear was the atmosphere that he could see a distance of forty miles, and was able to discern the sun glistening on the sea at Brighton.

Presently the air became very keen, and on his moustache long icicles formed, which he no sooner rubbed off than others took their places. For a few minutes he was quite deaf. He thought he was nearing Hastings or Brighton, for the salt smell of the sea reached him. The balloon then took a downward course, and to accelerate the descent he seized the guy rope, and pulled the balloon partly over on one side to allow some gas to escape by the mouth.

Sitting on his trapeze, Higgins kept an eager watch for the earth. At length he saw the welcome sight of some ploughed fields. The balloon travelled very rapidly in a southerly direction for about six miles, and then slowly descended. When he was about two thousand feet from the earth, he let himself hang by one arm from his trapeze rope, as if he were using his parachute. His feet touched the ground. The

balloon, which was in front of him, dragged him for several yards, and then rebounded sixty feet into the air between two trees. His perilous position was seen by some labourers, who ran to his assistance, and when he came to earth the second time, they seized the balloon and held it till the aeronaut let out the gas.

He landed on a farm at Penshurst, near Tunbridge, with hands, feet, and legs benumbed; but highly pleased with his remarkable escapade.

At the festival of the London Sunday School Choir, which was held at the Crystal Palace in 1892, one of the chief features of the entertainment was a balloon ascent by Captain Dale, a well-known and skilful aeronaut. About six o'clock on the evening of the 29th of June, the balloon was inflated, and the captain entered the car, accompanied by three companions. The order to let go was given, and the balloon rose quickly, travelling with the wind in a southerly direction.

In a few minutes an altitude of six hundred feet had been reached. The crowds of spectators in the grounds were eagerly following the course of the balloon, when all in an instant they were horrified to see it collapse. A large rent appeared in the side, through which the gas escaped almost in volume. The balloon dropped like a stone.

The aeronauts could be distinctly seen struggling against the fearful fate which awaited them. Ballast, bags, ropes, everything indeed which was likely to lighten the car was thrown out, madly, vainly. Some idea of their desperation may be formed from the fact that they wrenched the buttons from their clothing in their frantic endeavours to lessen the speed of their descent. These were afterwards found among the débris. Down came the balloon, and landed with a sickening thud on the grass near the lower lake.

Willing helpers were quickly on the scene. Everyone expected to find that the four occupants of the car had been dashed to pieces. All were alive, but fearfully injured. Captain Dale only lived a few minutes. The others were taken to the hospital. Nine days later, another death was added, that of Cecil Shadbolt, one of the secretaries of the Western Kent Sunday School Union.

CHAPTER XIII.

TRAGIC ADVENTURES.



NOTWITHSTANDING the host of dangers which attend the aërial traveller from the moment he enters the car till the time he leaves it, the number of casualties in the navigation of the air has been less in proportion than in the navigation of the sea. Taking fifteen hundred aeronauts and ten thousand ascents, only about fifteen lives have been lost.

There are, however, many tragic adventures on record. In the early part of the century an Englishman named Knight made a number of successful ascents from Bombay. One day, when the wind was blowing strongly from the land, an Indian prince came forward and offered him a large sum of money if he would make an ascent. Knight looked seaward, and without hesitation accepted the offer, for on the horizon he saw a numerous fleet of native boats. He

ascended, and was driven out to sea. On nearing the boats, he opened the valve and called to the men to come to his assistance; but when the Indians saw the monstrous apparition descending from the skies, they were filled with terror, and made all sail to get beyond the reach of the "superhuman monster." Left to his fate, the aeronaut was soon engulfed in the waves.

Madame Blanchard, the wife of the pioneer-voyager across the Channel, was as famous an aeronaut as her husband. She was a veritable queen of the air, and used to ascend in a car so small and fragile that it was likened to a child's cradle. On the 7th of July 1819 she made an illuminated ascent from the Tivoli Gardens. When at a great height, a quantity of escaping gas caught light from the fireworks, and in an instant the balloon was in flames. The people below, seeing the blaze, and ignorant of what had happened, rent the air with shouts of "Brava! Vive Madame Blanchard!" thinking that they were witnessing a new sensation.

Their shouts reached the ears of the aeronaut, who with splendid nerve was trying might and main to extinguish the fire; but the flames had obtained the mastery. The balloon descended, and she threw out her ballast to moderate her fall. Driven back by the increase of pressure, the gas re-entered the balloon

and was extinguished. She would yet be saved. But the pitiless wind blew her on to the roof of a house. At the moment of the shock she was heard to cry "*À moi!*" (Help). These were her last words. In gliding along the roof, the car caught in a piece of iron and was overturned. The brave lady was taken unawares, and before she could seize hold of a rope, she was precipitated to the street below, where she breathed her last.

The mistake of some French peasants led to the death of Lieutenant Gale in 1850. He made an equestrian ascent from Bordeaux, and descended in safety; but he failed to make the peasants who came to his assistance understand what he wanted them to do, and as soon as the horse was detached, the balloon flew upwards at a great speed. On the following day it was found, caught in the branches of a tree; but it was not till a week later that the horrible fate of the aeronaut was ascertained. He was found in a wood, his body having become the prey of wolves.

In 1865 a young aeronaut named Chambers fell a victim to inexperience and want of care. He ascended from Nottingham, and neglected to open the upper valve to allow the gas to escape, which consequently forced its way out by the neck. Feeling that he was being overcome by the fumes, Chambers twisted the

valve line round his wrist and pulled. Then he became unconscious. The balloon dropped to the earth with a crash, and the unfortunate aeronaut was picked up dead.

Captain Donaldson, an American aeronaut, made an ascent from Chicago in August 1875. The wind was so violent that at first it was found impossible to inflate the balloon. So determined was he, however, that he caused a row of lofty poles to be erected, across which stout sheets were stretched to break the force of the gale. When at length the globe was filled, two journalists entered the car, and the order was given to let go. The balloon rose, but was immediately dashed to the ground. One of the passengers profited by this accident to drop from the car and leave his companions to their fate. Relieved of his weight the balloon disappeared like an arrow in the direction of Lake Michigan.

A few hours later, the captain of a small Swedish schooner bound for Chicago saw the balloon approaching the water, and made all sail to the rescue. So fierce was the hurricane that the little vessel was soon alongside. The crew were about to lay hold of the netting and drag Donaldson and his companion aboard, when, with a supernatural suddenness, the balloon bounded from them, and was quickly lost to

view. Three weeks later the bodies of the luckless adventurers were cast ashore by the waves.

Another aerial traveller who lost his life under similar circumstances was Walter Powell, who started from Bath on the 10th of December 1881, accompanied by two friends. When they had drifted to a point near Bridport in Dorset, they attempted to descend within half a mile of the sea. The balloon struck the ground with such violence that his two companions were thrown out of the car, and before he could provide for his own safety, he was carried out to sea. A number of vessels went in pursuit, but returned without having obtained a sight of the balloon. The coasts of France and Spain were carefully searched; but no trace was ever found of the missing balloon or its occupant. Doubtless he was drowned in the depths of the Channel.

In June 1885 an aeronaut named Williams was killed at Charleston, West Virginia, under circumstances which ordinary courage and presence of mind could easily have prevented. He was in the car preparing to ascend when the balloon swayed against a furnace and was set on fire. The men who were holding the ropes became panic-stricken and fled. Williams had no chance of escape, and sat in the car calmly awaiting death. The burning balloon

rose a thousand feet into the air and then collapsed.

A honeymoon trip in the Alps had recently a disastrous ending. Captain Charbonnet, an aeronaut well known throughout Italy, presented his bride with a new balloon as a wedding gift, and in September 1893 the couple started from Turin, and descended at Piobesi, where they were received by the inhabitants with great enthusiasm.

On the following day, accompanied by a friend named Ponta, they made a fresh ascent, with the intention of passing the Alps and descending on French territory. All went well till they neared the Caramella Peaks, when the balloon was caught in a hurricane, and dashed with great violence against a glacier and made a total wreck. Strange to say, the travellers escaped with but trifling injuries. They spent the first night amid the snow and ice, obtaining what shelter they could under the remains of the balloon.

When day dawned, they decided to attempt the descent of the mountain, although the weather was very misty and bitterly cold. Charbonnet led the way. The party had not proceeded far when he suddenly disappeared in a crevasse. The whole of the day the survivors wandered about, dreading lest

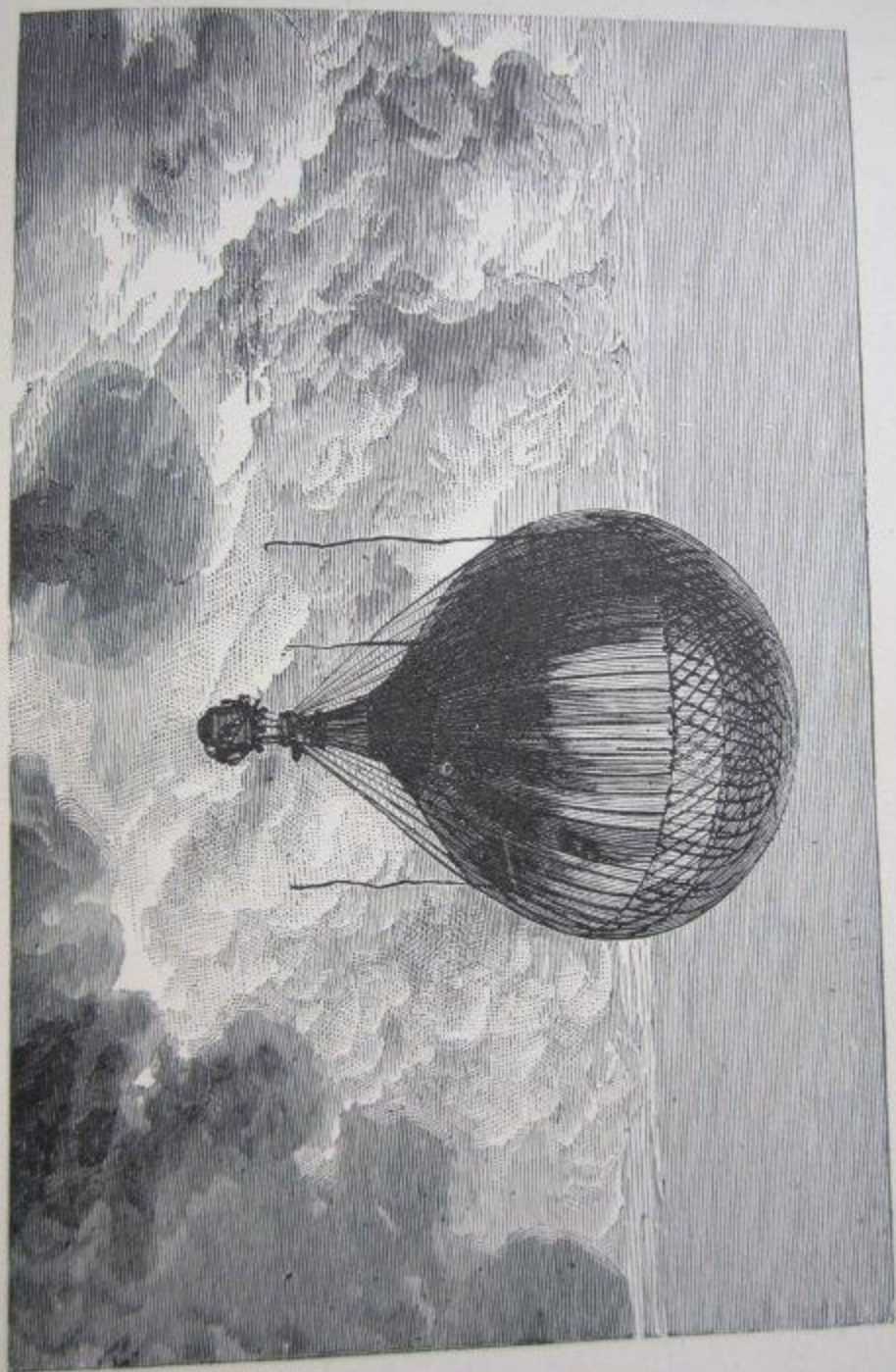
every step should precipitate them into some unfathomable abyss. Towards evening Ponta also fell and sustained serious injuries. Madame Charbonnet passed the second night in snow, watching by the side of her wounded companion, suffering terribly from cold and almost benumbed by grief.

In the morning Ponta was unable to move, so the brave lady set off alone to look for assistance. Again and again on that terrible journey she was on the point of giving up in despair, and would gladly have welcomed the sleep which meant death; but the thought that another life depended on her energy nerved her to go forward. At length, in a state of complete exhaustion, she reached a mountaineer's hut, where she told her sad story. A number of men at once set out to the rescue, and carried Ponta down to the hut, where he quickly recovered from his injuries, and with the widowed bride returned to Turin. Captain Charbonnet's body was afterwards found, fearfully mangled.

M. Boiteux, one of the survivors of the ballooning fatality which took place in France in August 1896, gives a thrilling account of the ascent. He says—

“When we had risen five hundred yards or so, we found ourselves in such thick clouds that we could distinguish nothing. Suddenly the balloon lay on one

"WE FOUND OURSELVES IN THICK CLOUDS."



side, and the car leaped terribly. At the same time we were lashed by large hailstones and heavy rain. We were driven forward with bewildering speed. In our fright we threw over everything that our hands came across. The balloon sprang upward like an arrow, and soon passed through the clouds. We were under a clear sky, in the light of the setting sun.

"Gradually it grew colder and colder, and our wet clothes were frozen stiff. One of my companions fell fainting to the bottom of the car, and the other three of us were not much better off. We were all bleeding, for the hail had wounded us. As I looked, I saw a large black cloud moving from south-west to north-east. But we still rose. Then I saw nothing more. The blood streamed from my nose and ears. My hands were frozen hard as a board.

"In a few minutes we had risen to a height of nearly five thousand yards. Then we began to sink, at first slowly, then rapidly. All at once we were again in complete darkness. We were in the midst of thunderclouds. Again, amid hail and rain, the wind drove the balloon on at a speed of ninety miles an hour. We were blinded by the hail, and could scarcely breathe. But I did not lose hope of reaching the earth in safety.

"Presently the hail and rain began to be mixed

with leaves and particles of earth. The car was violently shaken, and we fell against each other, and had to hold on to the ropes. Then we began to drag along the ground. The balloon suddenly rose. I let my rope go, and was dashed to the ground. Legrand, one of my companions, believed that I had voluntarily jumped out. He jumped out after me, and fell near me with a broken leg.

"Thus lightened of weight, the balloon rose more rapidly. Rushing through the tree-tops, it went on about six miles in the direction of Gretz. As it hung on the top of a tree, Foucard tried to land, caught a rope, but was thrown violently to the earth. A woman saw the balloon hanging in the trees, and sent the people at her inn to the rescue. Foucard was found covered with mud and ice, his face all torn. He still breathed. When his head was raised, with the intention of giving him stimulants, he was seized with a convulsion and soon expired. As he was carried away, a weak voice was heard calling from the car for help. Two ladders were brought and tied together, and a gendarme climbed up to assist Crepillon. It took an hour to get him down. On reaching the ground, he fainted away. He was cold as ice, and only regained his senses after continued friction."

CHAPTER XIV.

WHICH WAY DOES THE WIND BLOW?



ON the 5th of March 1882, Colonel Brine of the Royal Engineers, accompanied by Joseph Simmons, a professional aeronaut, set out from Canterbury to cross the English Channel. The most elaborate preparations were made to secure the success of the voyage. Meteorological observations were taken for several days, and it was arranged that a start should be made as soon as favourable reports were received. Early on the morning of the day named, a telegram was received, stating that the wind at Dover and Cape Gris Nez was moderate from the north, and likely to draw north-westwards.

The conditions being so far favourable, it was decided to start at once. The gas was turned on at half-past eight, and in two hours the balloon was fully inflated; but delays occurred, and it was not until

half-past eleven that the order to "let go" was given. The adventurers took with them a quantity of provisions, and a life-saving apparatus in case of accident in mid-Channel.

Thousands of persons had assembled to witness the departure, and as the balloon rose slowly into the air, it was followed by loud cheers and hearty wishes for a successful voyage. Gradually the balloon reached an altitude of sixteen hundred feet, and the first three miles were traversed in six minutes. Shortly afterwards, however, the wind fell and the balloon rapidly descended over a field, so low indeed that the aeronauts heard some boys say, "They are coming down in our field." The discharge of a quantity of ballast enabled them to rise four hundred feet; but a few minutes later, a further sacrifice of ballast was found necessary to maintain this height.

As they approached the sea, they noticed that the ships in the Channel seemed as if they were sailing in air and not on the water. About half-past twelve, when the balloon was between Folkestone and Dover, the sun described a perfect photograph of the balloon and car on a cloud which surrounded them. The effect was most remarkable, and struck the voyagers with a feeling akin to awe.

Readers of Jules Verne may remember his account

of a similar optical illusion—"the effect of a mirage," which created alarm in one of the occupants of the balloon, whose five weeks' journey among the clouds is so graphically told by the famous author.

"We could see our own reflections," says Simmons, "and every detail, even to the untying of a knot, which I happened to be doing at the time. It was a perfect portrait. There was, at this moment, a lovely rainbow surrounding the car—not the balloon—about ten feet in diameter, and the beauty of the whole scene was strikingly grand."

It was nearly one o'clock before the balloon passed over Shakespeare Cliff and floated out over the Channel. "It was a magnificent sight to see the slight surf on the coast line backed by the green sea, while over behind us stood the snowy chalk cliffs." Wishing to go higher, ten pounds of ballast were thrown out, and the balloon reached an elevation of nineteen hundred feet. The current here was bearing directly for the coast of France; but the wind suddenly changed to a south-easterly direction. The aeronauts therefore descended a few hundred feet in the hope of finding a favourable breeze; but in spite of all their manœuvring they were unable to effect their object, and swung about at the mercy of the gusts, which blew first south-east and then south-west.

A slight mist came on, and the colonel gave it as his opinion that they were drifting rapidly towards the North Sea. Simmons, who saw that it was impossible to reach Calais, but did not want to admit failure without another attempt to reach a favouring current, did not reply. Soon, however, even he was forced to admit that the colonel was right.

On taking a turn downward, the Calais mail-boat was sighted, and from the direction of the smoke from the funnels, the aeronauts saw that a steady south-westerly breeze was blowing. This caused them to take prompt action, and they put on their cork jackets. There was not a moment to be lost if the packet was to pick them up, so the valve was opened, and the balloon descended, striking the water with great violence, about half-past two. They were at this time about thirteen miles from Dover and eight from Calais.

The following account by Captain Jutelet of the mail steamer graphically describes what happened. He says—

“As we were on our voyage from Calais to Dover, we saw the balloon bearing north-north-west of us. The balloon was about five hundred yards up, and we hoisted our flags to salute the aeronauts. We cheered them several times as we passed under them. Im-

mediately after this we saw them drop something, but I did not know what it was then. I afterwards learned that it was an anchor, and was intended as a signal to us to stop.

"After we had passed the balloon some little distance, I saw it dropping, and I then bethought myself that they wanted our assistance. I told the men to get ready one of the lifeboats. I also altered the course, and went back after the balloon, which had by this time struck the water. We were about twelve minutes before we overtook them, as the balloon was dragging the car through the water at the rate of about two miles an hour. When we got alongside, I called out—

"Do you want any assistance?"

"Lower your boat and pick us up," shouted Simmons in reply.

"At this time the balloon was quite upright, and had not lost a great quantity of gas. Simmons was very nervous lest our paddle-wheel should come in contact with the car, so I lowered a boat and picked up the two aeronauts, at the same time dragging the balloon on board the vessel at the bow.

"I had sixty-eight passengers on board, and I found it necessary to take great precautions with the balloon, on account of the large quantity of gas it

contained. Simmons was afraid of anyone going near it in case they should be choked. I was afraid lest a spark might send us all to the bottom. I altered our course in the hope of driving the gas out, but that did no good, and it was not until I made two slits in the silk, and so allowed the gas to escape, that we were able to continue the passage."

The captain also said that when the aeronauts were rescued, they were drifting rapidly towards the North Sea, and when the rescuing boat got alongside, they were sitting up to their knees in water.

After a delay of twenty-five minutes, the voyage to Dover was resumed, at which port the adventurers were received with hearty cheers and congratulated on the plucky fight they had made against adverse circumstances.

Delays are proverbially dangerous, and to the delay occasioned at the start, the failure of the attempt was in no small measure due. Was it possible to accomplish the voyage? was now the great question, or was the wind always blowing from the coast of France?

CHAPTER XV.

BURNABY'S TRAVELS IN THE AIR.



SHORTLY after the unsuccessful attempt to cross the Channel related in the previous chapter, Colonel Burnaby, the famous Guardsman, determined to prove that such a voyage could be undertaken and accomplished. From Wright, the aeronaut of the Crystal Palace, he obtained a suitable balloon, which he had conveyed down to Dover, where he arranged with the manager of the gasworks for the inflation.

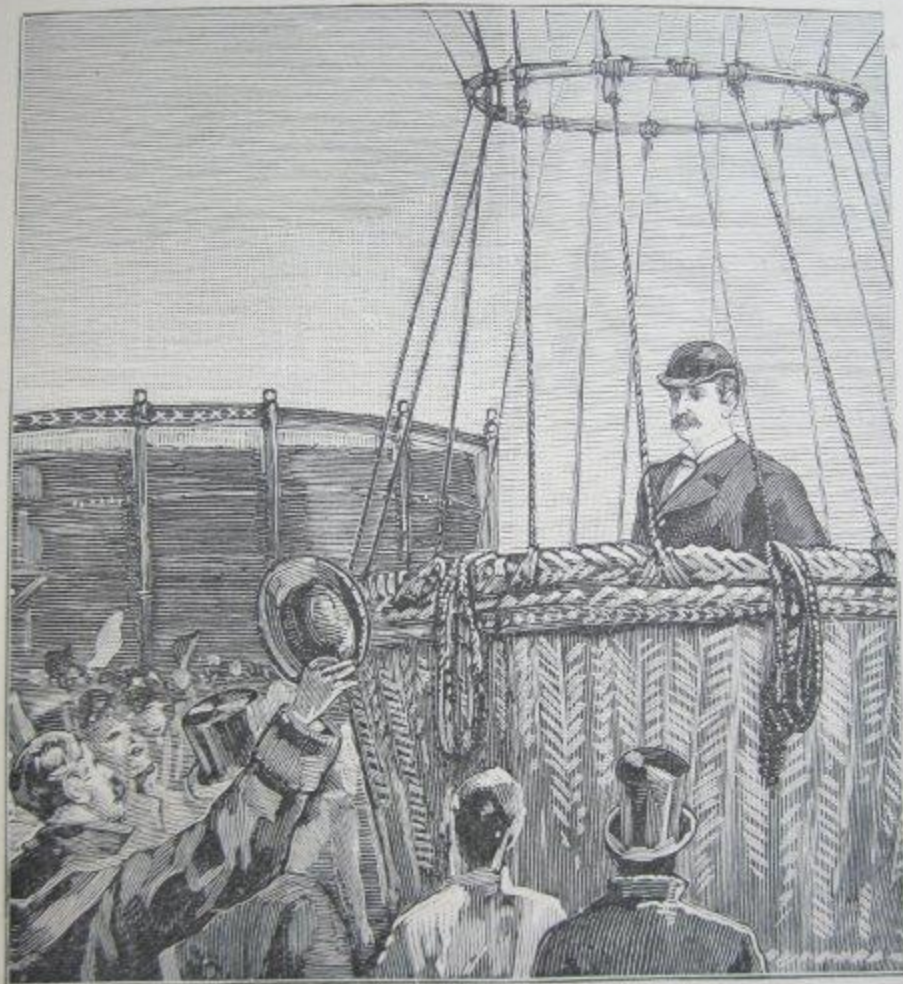
The news of the colonel's venture quickly became public, and he was inundated with offers from people in all parts of the country who wished to accompany him; but their company was declined. Burnaby had firmly made up his mind to go alone, and he rightly judged that on this depended the success of his expedition; even when he made this fact known, offers still came in,—the aeronaut who had provided

the balloon being the most pressing,—but nothing could shake Burnaby's determination.

At length all arrangements were completed, and the aeronaut arranged to start on the first suitable opportunity. He had not long to wait, for in a few days the wind blew strongly from the north. Quickly the balloon was inflated, and Burnaby stepped into the car. His outfit consisted merely of a few scientific instruments and a rug, while his provisions were limited to a few sandwiches and a bottle of mineral water. A few minutes before ten the colonel gave the order to "let go," and the balloon rose slowly in a seaward direction. At the very outset of his voyage he was threatened with disaster. Right in his path was a tall chimney, towards which the balloon sailed with unerring precision. Ballast was precious, and he was unwilling to throw away a single ounce; he therefore waited until the last minute, in the hope that the wind might carry him over or past the obstruction, but there was no chance, so over went a small bag. The balloon rose, and the car just cleared the chimney.

It was an ideal morning for the attempt. The wind was steady and the sky bright. As he sailed over the blue waters of the Channel, the daring aeronaut had time to look back on the "dear white cliffs of Dover" surmounted by the ancient castle,

while at the foot lay the old-fashioned town and the busy port. Behind were green fields and hedges,



COLONEL BURNABY STARTING ON HIS TRIP.

which formed a striking background to a picture which he noted with the eye of a soldier, and appreciated with that of an artist.

For rather more than half the distance, the voyage was rapid and uneventful. The French coast now came in sight, and the aeronaut recognised that he was opposite Boulogne. Up to this time the sun had been bright, but the sky became cloudy, and the balloon began to descend rapidly. The barometer registered nine hundred feet. A quantity of ballast was thrown out, but without checking the downward course. Bag followed bag in quick succession, and it was not until the car was within four hundred feet of the waves that the balloon took an upward flight.

The ascent was continued till a height of fifteen hundred feet had been reached. Then the aeronaut had time to look about him and take his bearings. To his surprise, the coast of France, which but a short time before had been clearly seen, was lost to view. While he had been busy with the ballast, the wind had veered round almost due east, and swept him away from the shores which he had almost reached.

In a short time another change in the weather set in. The balloon hung motionless in the air, the sea was like a sheet of glass. In the water below him were two fishing-boats, the crews of which offered to help him if he came down. He took no notice of their signs, beyond throwing down a copy of the

Times, which fell straight into the water as if it had been a stone.

For an hour the balloon remained in this position. Then it suddenly dropped, and, as before, was not checked till within five hundred feet from the water. The fishermen came nearer and renewed their offer with no better result, so, after waiting for some time longer, they waved their caps and rowed away.

Their disappearance was a great relief to Burnaby's mind. He had set out with the firm resolve that no action on his part should interfere with the success of the voyage, and he found the near presence of help a strong temptation to give up his self-imposed task and descend in safety.

The balloon was still stationary. The day was wearing late, and unless he could find some means of reaching the other side in reasonable time, the gas would become exhausted, and his trip would end as previous attempts had done—in the water. He sat down to consider his position, and in defiance of one of the most stringent precepts of aeronautics, he lit a cigar. All the lower air currents, he had found by experience, were dead against him. His only chance was therefore to ascend, in the hope of encountering a stream which would carry him to France. There were five bags of ballast left, and these he

judged to be sufficient to enable him to carry out his plan.

Overboard went bag number one, and fell into the sea with a loud splash. The balloon rose to three thousand feet. Another bag followed; but the sound of its striking the water did not reach the aeronaut's ears, so quickly was he ascending. At an altitude of seven thousand feet, a third bag was thrown out. This had the desired effect. Rapidly the balloon shot up to ten thousand feet, and entered into a current which carried it swiftly towards France. The cold was now intense, and a dense cloud enveloped the car for some time. When he emerged, however, Burnaby was overjoyed to see in front of him the harbour of Dieppe—he had crossed the Channel.

The object of his journey was accomplished, and he prepared to descend, when it occurred to him that he might possibly encounter an adverse current which would carry him out to sea again. He therefore continued his journey overland. So overjoyed was he at his success that he did not pay strict attention to the country over which he was travelling, with the consequence that, before he was aware of it, he was in a hilly district. He could not throw out ballast in time to avert a collision, and hung on with might and main to the car. There was a tremendous jerk, his

rug and thermometer were thrown out, and the balloon rebounded a hundred feet into the air.

Presently a ploughed field suggested a suitable landing-place, and he let go his grapnel. The anchor held for a moment and then broke loose; all the time the balloon jumped about in a most alarming fashion. Firmly grasping the hoop with one hand, and with the other tugging at the valve line, Burnaby waited the end. At last the anchor caught in a bank and held fast.

A crowd of people who had followed him quickly came to his assistance. Men and women alike were in a state of great excitement. Never before had a balloon descended in that part of Normandy, and they were highly gratified with the honour. They vied with one another in assisting "Monsieur" to pack up his balloon, and then the farmer on whose land he had alighted took him to his house, where he was most hospitably entertained.

On the following morning, when Burnaby was leaving, his host took him to one side and made him promise that if he ever came again by balloon to that neighbourhood he would be his guest, a promise which the colonel laughingly made.

When the news of this successful attempt reached England, it created considerable surprise, for few had

thought that Burnaby knew enough about ballooning to achieve such a result. To the majority he was a dashing cavalry man and an intrepid traveller, fond of danger and adventure, and when he started they thought he was only seeking a fresh excitement; but the colonel was really an experienced aeronaut, and a member of the Aeronautical Society.

His first balloon adventure, which happened in 1864, is typical of the man as we knew him. One evening he was strolling about one of the public gardens in London with a number of brother officers. It was in the days before the Montgolfier had been banished, and the French aeronaut Godard had arranged to make an ascent on the following evening. As they were discussing it, another officer came up, accompanied by Godard, who was introduced to Burnaby as "the man who is going up to-morrow."

"That will be capital fun," replied Burnaby.

"Fun, do you call it?" said the other, "when a man runs the risk not only of getting his neck broken if anything goes wrong, but of being roasted to death as well. I should like to see you do it."

This was a direct challenge, and Burnaby promptly accepted it. He spoke to Godard, and in a few minutes everything was arranged. The aeronaut

agreed to take him if he paid £5 and promised to help in keeping up the fire.

On the following evening Burnaby hurried to the gardens, where he met numbers of his friends who had come to witness the performance. Leaving them to enjoy their laugh at his expense, he went towards the balloon, which was suspended from a rope between two poles. As he looked at the crazy machine in which he was about to risk his life, he wished he had not been so rash.

The car was of wood, and measured about nine feet across. In the centre was a large iron grating, from which a chimney extended several feet into the balloon. There was no netting, the car being simply fastened to cords stitched in the cloth. Trusses of straw with which to feed the furnace hung round. Burnaby's misgivings were in no way lessened when Godard and his assistant started the fire. The flames roared up the chimney into the balloon, and sparks flew in all directions.

Burnaby, however, was determined to go through with the matter, and when the balloon was fully distended, he went forward to take his place in the car. But Godard refused to take him; he said there was not enough ascending power, and that he would willingly take him up another time. Burnaby retired

and explained the situation to his friends, who laughed and hinted that he was afraid.

Godard gave the order "Let go," and the ponderous car rose slowly. It was about five feet from the ground, when Burnaby suddenly sprang forward, seized the edge of the car, and vaulted in. His weight was too much for the balloon, which sank again to the earth. More straw was piled on the furnace, and the machine again rose; but in its ascent it came into collision with one of the masts, which broke in two like a pipe-stalk. They got clear of the grounds without further accident, and sailed across the Thames; but there was little wind, and at no time did the Montgolfier rise more than eight hundred feet.

Greenwich Marshes was the spot chosen as the landing-place. The balloon grounded on the shore within a few yards of the river and then rebounded. To the horror of the aeronauts, they saw the balloon making straight for a stone embankment. We can imagine the excitement of the aeronauts during the next few minutes, when we remember that the fire was still burning brightly, and the roar of the furnace nearly drowned all other sounds. The primitive way in which the car was attached added another element of danger. Crash went the balloon against the stones; but by careful management the equilibrium

of the car was preserved, and what threatened to be a serious disaster was avoided. Shortly afterwards the balloon was brought to a standstill, and the party alighted in safety.

After this Burnaby made a number of ascents from time to time, and as a member of the Aeronautical Society he took an active interest in the practical scientific aspect of ballooning. This led on one occasion to a very strange adventure, which, however, is not without its amusing side.

A Frenchman came forward with a balloon shaped in the form of a gigantic bladder pointed at both ends. In the car machinery was fitted which, when set in motion, could be used to steer the balloon. The machinery consisted of two large wheels which, on being turned, caused two sets of large fans to revolve. These were fixed over the car, and could be set at any angle, to suit the direction in which the aeronaut wished to travel.

The inventor made arrangements to exhibit his machine and give a practical demonstration of its working powers. Anxious to investigate the matter fully, Burnaby arranged to accompany him. The balloon was inflated, the inventor and his assistant and the captain took their seats in the car; but there was no ascent. Then the Frenchman called out,

"Now I will show you the great advantage of my invention. I will take ballast out until five pounds more taken away would cause the balloon to rise. We will then work the wheels, the screw fans will revolve. As they revolve we shall leave the earth."

Burnaby's interest had now reached the pitch of curiosity, and he worked with his utmost strength at the wheels; but the united efforts of the aeronauts were in vain. Though the fans revolved at a tremendous pace, the car did not budge an inch. The people who had assembled to see this wonder laughed scornfully. Becoming tired of this fatiguing and fruitless labour, Burnaby took up a small bag of ballast which was lying near and quietly dropped it over the side. The balloon rose at once. The Frenchman thought the ascent was due to his invention, and graciously bowed his acknowledgments to the cheers of the crowd.

The wind blew the balloon towards the Thames. The day was cold, and the gas condensed rapidly, and the balloon began to descend. Trusting in his invention, the Frenchman paid no heed, but worked away at the wheels. The descent continued in spite of the revolving fans. A moment more and they would be in the water; but Burnaby, thinking that it would go badly with them all to fall into the water surrounded with ropes and netting, dropped a large bag of ballast

overboard. Again the balloon ascended. The Frenchman's face relaxed; but his triumph was short lived. The splash of the bag as it touched the water told him of the trick that had been played, and he was furiously indignant. "Why," he asked Burnaby, "did you not trust to the fans? They lifted the balloon before, and would have done so this time if they had had a chance." The captain kept his own secret, and nothing more was said.

The balloon ascended rapidly to a height of three thousand feet, when something caused the Frenchman to look up, and instantly a look of horror came over his face. Burnaby followed his gaze, and saw that in the excitement of the start they had forgotten to untie the neck of the balloon and so allow for the expansion of the gas. Owing to the peculiar construction of the globe, it was absolutely impossible to reach the neck and undo the fastenings. There was therefore no resource but to sit and wait until the pressure of the atmosphere caused the balloon to burst.

They were ascending rapidly, and a few moments must decide their fate. Suddenly a cracking sound was heard, and the balloon dropped with frightful velocity. Each man held his breath. With equal suddenness the downward rush was stayed, and on looking to see the cause, the aeronauts found that the

lower part of the balloon had been forced into the upper part of the netting, thus forming a kind of parachute. They breathed freely again, and prepared to land. In a few minutes they touched the earth about three miles from where the accident had occurred, thankful to have escaped without injury.

CHAPTER XVI.

WITH ANDRÉE ACROSS THE BALTIC.



FEW years ago S. A. Andrée, one of the first engineers in Sweden, and famous in this country for his attempt to reach the North Pole by balloon, made a remarkable flight over the Baltic Sea, a feat never before accomplished. For several months he had been engaged in making ascents solely for purposes of scientific research, and on the 19th of October 1893 he went up to verify some of his observations. Having finished his work, he prepared to descend, when suddenly, before he had time to open the ventilator, the balloon began falling of itself at a terrific speed. Down it went until it reached a white cloud, when it stopped and sailed round like a swan on the water for a few minutes, then it sank through the cloud.

Meanwhile Andrée had been too much occupied to notice the direction in which he was drifting, and the

cloud prevented him from forming any idea of his whereabouts. When, however, he came through, he was greatly astonished to find himself sailing out over the Baltic. Certain death stared him in the face. He had no hope of escape unless he could reach Finland or meet with a vessel. It was indeed a perilous position; but his presence of mind did not for a moment forsake him.

"Soon I saw," he says, "through my glasses, a steamer trying to cross the way the balloon would take, and being straight in my course, it suddenly stopped. This action on the part of the steamer was simply madness, as the sparks in the smoke-stacks could easily light the gas in the balloon, amounting to some 16,000 cubic feet, the explosion of which without doubt would have killed many persons. Happily the captain perceived the danger, and moved his vessel round."

"Now it was my turn to try the best way of coming down. I threw out the anchor, and the speed of the balloon was slackened; but the steamer was still out of hearing. Then I fastened two empty ballast sacks on my last rope, and threw them into the water. The balloon nearly stopped. The steamer had by this time put out all fires, and could not come nearer, so that all hope of rescue by this means was at an end."

Andrée now saw that there was nothing for it but to try to reach the coast of Finland. He accordingly tried to get the ropes up from the water; but when he raised the first above the surface, the balloon sank under the additional weight. He therefore cut away the sand-bags, and the balloon was carried forward by the wind at the rate of about fourteen miles an hour.

Shortly afterwards he sighted another ship which offered him assistance; but the risk of descending was too great, and he declined, and continued on his perilous course. His previous experience had taught him that if he tried to go down to the surface while the vessel lay in his way, the balloon would have rebounded from the water, and he should have been thrown out and probably killed.

The force of the wind was now greatly increased, and the balloon was speeding along at eighteen miles an hour. It kept at a height of about eight hundred feet above the surface, and although it often sank down very near the water, the car was never once dipped. To prevent such a catastrophe Andrée cut away the anchor, which he had been unable to raise. It was a bold act, but a necessary one.

The wind began to blow still harder, and a little rain fell; stronger and stronger blew the wind, and the aeronaut began to prepare for the worst. He enclosed

his valuable observations in an air-tight tin, and gave instructions where to send them if found, so that if disaster happened, they might be saved. It was getting dark when he passed over the first cliff on the coast of Finland. Shortly afterwards the wind changed, and instead of blowing him into the interior of the country, it drove him along the coast.

"For ninety minutes I was standing on the edge of the car with some ballast in my hands, ready to throw it out in case of danger of collision with a cliff. Suddenly I saw a sharp light. I supposed it was a lighthouse; but there appeared now two, then three lights; it was evidently a building. For one moment I lost my presence of mind and failed to grapple the rope to the ventilator and hang on to it with all my powers. Now it was too late. I had passed the island, and the balloon came down into the water. I was lying in the bottom of the car, and the water rushed in with such force that I could not move. The most of the way to the next island I was under water.

"But this could not continue. At length, after much turning and twisting, I succeeded in getting my legs over the edge of the car, just when the balloon swept over the next cliff. It was a wonder I escaped without having them broken. I tried several different positions, but the car was so unsteady that I was never safe.

But I could not endure it much longer. I felt myself so feeble that it would have been an impossibility for me to try and hold the balloon. I had only one course now to pursue—to save my life. Passing over the next cliff, I jumped down. The balloon shot up in the air and disappeared.

“I was saved; but, alas! in what condition and for how long a time. I had hurt my leg in falling and could not stand, so I crept round the cliff in search of shelter; but none was to be found. It was now between seven and eight o’clock. For a couple of hours I shouted aloud, in the hope that it would be heard by some passing boat; but the raging storm took away the sound of my voice.

“I then turned my attention to making myself as comfortable as possible for the night, though the prospects were anything but pleasant. I was wet through, my fur cap had blown away, and I had nothing to put on my head. This made me specially anxious, because my only chance of being rescued was to keep my head clear. I made a cap of some handkerchiefs and lay down on the cold ground, hungry and shivering, trying to keep up my courage if not my temperature. So passed the long night.

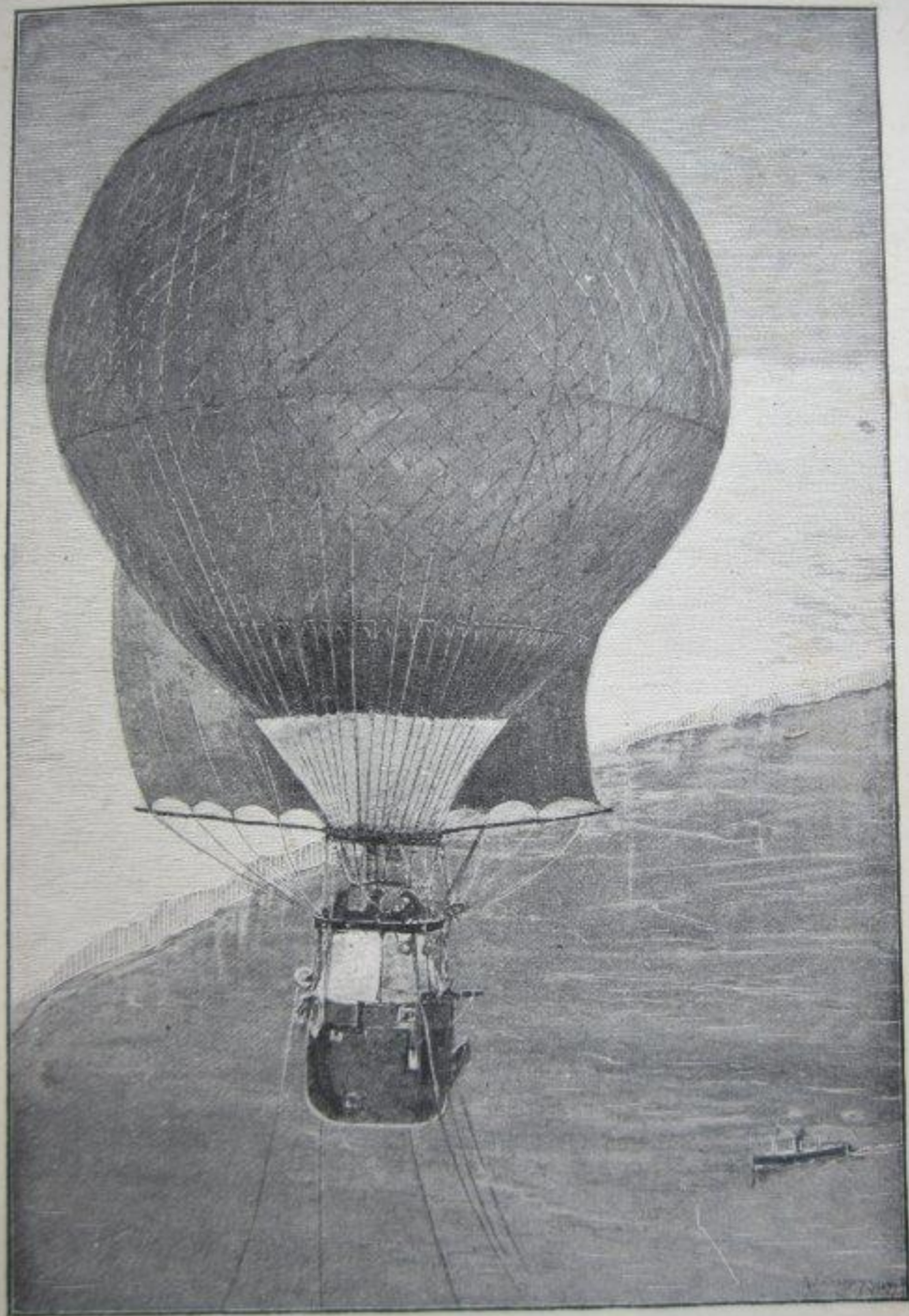
“At length day dawned. I was now able to stand, and with my glasses, which I had fortunately round

my neck, I saw in the distance the island over which I had passed the night before. In order to draw attention to my position, I took off my trousers and waved them in the air. Shortly afterwards I was glad to see a boat sail out from the island and steer straight for the place where I lay.

"I soon saw they had not set out in response to my signal, for the men never once looked in the direction of the cliff, and the boat passed me. I shouted myself hoarse; but in vain. I began to look about to see if I could make a raft out of the few trees there were; but as I had neither axe nor knife, I was obliged to give up the idea.

"When I returned to my sleeping-place, I found a boat close by. A man on the island had seen a big square boat with an enormous sail come sailing from the sea with a terrific sweep, and go flying over the ground, and again disappear in the sea! This was my balloon, or rather his description of it, for the islanders had never seen anything of the kind before.

"His curiosity was aroused, and early in the morning he went down to the beach with his glasses to see if he could find out what the strange apparition could have been. He then saw my signals and put off at once to the rescue. I was quickly taken over to his home and well cared for."



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The balloon was afterwards recovered on another island some miles away, little the worse for the extraordinary voyage it had made. The value of this ascension from a scientific point of view was very great, and the courage of Engineer Andrée, no less than his scientific qualifications, entitle him to rank among the famous aeronauts of modern times.

It is, however, in connection with his daring scheme to reach the North Pole by balloon, that Andrée's name will be ever remembered. Impossible as it seemed to carry such a plan to a successful issue, the courageous aeronaut found many supporters among his own countrymen, who came forward with liberal funds for equipping the proposed expedition. A balloon was accordingly constructed named the Eagle, capable of carrying three persons, a supply of provisions for four months, besides the necessary ballast and scientific instruments. The car contained a dark room for photography and a well-protected sleeping apartment for the three travellers. The roof of the rooms was boarded to form the floor of the upper storey, which served as a sort of promenade deck.

Danskoe in Spitzbergen was chosen as the starting-point, and thither accordingly the balloon was sent in the spring of 1896. On the 23rd of July it was inflated, and four days later everything was ready for

launching. For two months Andrée and his two companions, Eckholm and Strindberg, waited for a favourable breeze; but in vain. The wind continued contrary. Winter came on, and the expedition had to be abandoned.

Undaunted by the failure of their first attempt, however, the explorers determined to return in the following spring. In the meantime Eckholm withdrew from the enterprise; but Andrée and Strindberg, who had never lost heart, returned to Spitzbergen in the summer of 1897 to wait for a favourable wind.

This time their perseverance was rewarded. A brisk southerly breeze sprang up, and the balloon sailed northward over the weird white Polar sea. Since then the courageous aeronauts have not been heard of. Time alone will tell whether they have solved the problem of the ages, and added to the store of the world's knowledge, or whether they swell the number of those who have perished in the attempt.

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